

CITY OF LEEDS

REPORT

ON THE

Health & Sanitary

Administration

OF THE CITY

FOR THE YEAR 1932

By J. JOHNSTONE JERVIS, M.D., D.P.H.,

Medical Officer of Health.

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PUBLIC HEALTH COMMITTEE.

LORD MAYOR (Alderman R. H. Blackburn).

Chairman : Councillor A. E. WEAVER.

Alderman GERTRUDE DENNISON.	Councillor D. BEEVERS.
Councillor F. BARRACLOUGH.	" J. W. HEMINGWAY.
" G. BRETT	" LIZZIE NAYLOR.
(Deputy Chairman)	" Z. P. FERNANDEZ.
" H. N. HOWORTH.	" BEATRICE C. IVES.
" DOROTHY MURPHY.	" J. W. WHITFIELD.

SUB-COMMITTEES.

MATERNITY AND CHILD WELFARE.

Chairman : Councillor A. E. WEAVER.

Alderman G. DENNISON.	Councillor J. W. WHITFIELD.
Councillor F. BARRACLOUGH.	" D. BEEVERS.
" DOROTHY MURPHY.	" L. NAYLOR.

CO-OPTED MEMBERS.

LADY MAYORESS (Mrs. R. H. Blackburn).	Mrs. H. E. WEAVER.
	Mrs. AUSTYN BARRAN.

CO-OPTED MEMBERS FOR INFANTS' HOSPITAL, WYTHIER.

Mrs. B. M. DAVID.	Mrs. T. L. E. SPILMONT.
Dr. CLARA STEWART.	

TUBERCULOSIS.

Chairman : Councillor DOROTHY MURPHY.

Councillor B. C. IVES.	Councillor L. NAYLOR.
" A. E. WEAVER.	" F. BARRACLOUGH.
" J. W. WHITFIELD.	" G. BRETT.
" J. W. HEMINGWAY.	" Z. P. FERNANDEZ.

SEACROFT HOSPITAL.

Chairman : Councillor G. BRETT.

Alderman GERTRUDE DENNISON.	Councillor H. N. HOWORTH.
Councillor D. BEEVERS.	" A. E. WEAVER.
" Z. P. FERNANDEZ.	" B. C. IVES.
" J. W. HEMINGWAY.	" L. NAYLOR.

JOINT DAY NURSERIES.

<i>Representing Maternity and Child Welfare Committee.</i>	<i>Representing Education Committee.</i>
Alderman GERTRUDE DENNISON.	Councillor G. HALBOT, J.P.
Councillor A. E. WEAVER.	
" D. BEEVERS.	

Representing Leeds Day Nurseries Association :

Mrs. E. S. G. FOWLER.	Councillor B. C. IVES.
-----------------------	------------------------

CATTLE DISEASES, MILK AND MEAT.

Chairman : Alderman G. DENNISON.

Councillor J. W. WHITFIELD.	Councillor L. NAYLOR.
" J. W. HEMINGWAY.	" D. BEEVERS.
" A. E. WEAVER.	" G. BRETT.
" H. N. HOWORTH.	" F. BARRACLOUGH.

PUBLIC HEALTH STAFF.

Medical Officer of Health and Chief Tuberculosis Officer.	J. JOHNSTONE JERVIS, M.D., Ch.B., D.P.H.
Chief Assistant Medical Officer of Health	E. A. UNDERWOOD, M.A., B.Sc., M.B., Ch.B., D.P.H.
Assistant Medical Officer of Health for Maternity and Child Welfare and Medical Officer of Infants' Hospital	GLADYS J. C. RUSSELL, M.B., Ch.B., D.P.H.
Assistant Medical Officers for Maternity and Child Welfare	SARAH N. S. BARKER, M.B., Ch.B., L.R.C.P., M.R.C.S. MARIA L. GAUNT, M.B., Ch.B. ANNE M. FORREST, M.B., Ch.B., D.P.H. MARION KNOWLES, M.B., Ch.B. CATHERINE M. GRAY, M.B., Ch.B.
Consulting Clinical Tuberculosis Officer	H. de CARLE WOODCOCK, M.D., M.R.C.S., F.R.C.P. (Edin.), D.P.H.
Chief Clinical Tuberculosis Officer ..	N. TATTERSALL, M.D., B.S., Ch.B.
Assistant Clinical Tuberculosis Officer	S. THOMPSON, M.B., Ch.B., L.M.S.S.A.
Assistant Clinical Tuberculosis Officer	M. I. JACKSON, M.R.C.S., L.R.C.P.
Dental Officer for Maternity and Child Welfare and Tuberculosis	W. L. FLEMING, L.D.S.
Medical Superintendents—	
Infectious Disease Hospital (Seacroft).	J. S. ANDERSON, M.A., M.D., Ch.B., D.P.H.
Killingbeck Sanatorium	W. S. GILMOUR, M.B., Ch.B.
Gateforth Sanatorium	A. C. MEEK, M.A., M.B., Ch.B., D.P.H.
Venereal Diseases Officer	J. P. BIBBY, M.B., Ch.B., M.R.C.P.
Assistant Medical Officer for Venereal Disease	M. STODDART-SCOTT, M.D., Ch.B.
Do.	DOROTHY PRIESTLEY, M.D., B.S.
City Bacteriologist	J. W. MCLEOD, F.R.S., M.B., Ch.B.
Public Vaccinators	E. S. G. FOWLER, M.R.C.S., L.R.C.P.
Do. do.	M. SHERWIN, M.B., Ch.B.
Do. do.	A. A. ROBERTS, M.B., Ch.B.
Do. do.	N. F. WINDER, M.B., Ch.B.
Do. do.	J. FRIEND, L.S.A.

Public Vaccinators	..	..	..	F. W. M. GREAVES, M.D., Ch.B., D.P.H.
Do.	do.	..	..	J. E. MIDDLEMISS, F.R.F.P.S., M.R.C.S.
Do.	do.	..	..	J. CARDIS, M.D.
Do.	do.	..	..	C. P. KELLY, Jun., M.B., Ch.B., B.A.O.
Do.	do.	..	..	J. J. REYNOLDS, M.B., Ch.B.
Do.	do.	..	..	W. P. BEAN, L.S.A.
Do.	do.	..	..	J. E. RUSBY, L.M.S.S.A.
Do.	do.	..	..	W. WAY, M.R.C.S., L.R.C.P.
Do.	do.	..	..	D. M. SUTHERLAND, M.B., Ch.B.
Do.	do.	..	..	T. D. PRATT, M.B., Ch.B., M.R.C.S., L.R.C.P.
Do.	do.	..	..	W. G. PLATT, M.B., Ch.B., M.R.C.S., L.R.C.P.
Do.	do.	..	..	J. H. E. MOORE, M.A., M.B., Ch.B.
Do.	do.	..	..	E. A. ROCK, M.R.C.S., L.R.C.P.
Do.	do.	..	..	J. J. CRAWFORD, M.D., Ch.B.
Do.	do.	..	..	J. P. G. DALY, M.B., Ch.B., B.A.O.
Do.	do.	..	..	J. A. YOUNG, M.R.C.S., L.R.C.P.
Do.	do.	..	..	J. W. ALEXANDER, M.D., M.R.C.P., L.R.C.P.
Do.	do.	..	..	J. DICK, M.B., Ch.B., D.P.H.
Do.	do.	..	..	F. DANKS, M.B., Ch.B.
Do.	do.	..	..	M. MELVIN, M.B., Ch.B.
Chief Veterinary Officer	..	..	J. A. DIXON, M.R.C.V.S.	
Assistant Veterinary Officer	..	..	E. F. MCCLEERY, M.R.C.V.S., D.V.S.M.	
City Analyst	..	..	C. H. MANLEY, M.A., F.I.C.	
Assistant City Analyst	..	..	R. W. SUTTON, B.Sc., F.I.C.	
Divisional Sanitary Inspector	..	..	E. STANDISH.	
Do.	do.	..	G. F. MARSHALL.	
Removal Officer	..	..	D. FERGUSON.	
Chief Health Visitor and Inspector of Midwives	..	..	MARY E. HUGHES.	
Principal Clerks—				
Finance	..	..	A. R. BEST.	
Statistics	..	..	J. P. MOIR.	
Sanitary	..	..	A. SPARKS.	
Infectious Diseases	..	..	H. O. PEAKE.	
Secretarial	..	..	P. A. WOODCOCK	
Food and Drugs	..	..	F. S. KELLY.	
Tuberculosis Dispensary	..	..	F. H. WOOD.	

Special Inspectors including Smoke, Lodging-houses, Food and Drugs, Dairies, Meat, Housing and Workshops	16
Laboratory Assistant	1
Sanitary Inspectors	19
Vaccination Officers (5 part-time)	6
Female Sanitary Inspectors	2
Health Visitors	35
Sunlight, Orthopædic and Dental Nurses	3
Chief Health Visitor and Inspector of Midwives	1
Tuberculosis Nurses	11
Dispensers	8
Masseuses	3
Clerical Staff and Almoners.. .. .	44
Removal and Disinfecting Staff	18
City Hospital, Seacroft (3 Assistant Medical Officers, 1 Matron, 2 Assistant Matrons, 1 Sister Tutor, 86 Nurses, 66 Female Servants, 1 Chief Engineer, 1 Steward, 43 Male Servants, including Engineers, Porters, etc., 1 Dispenser, 2 Clerks)	207
Killingbeck Sanatorium (2 Assistant Medical Officers, 1 Matron, 1 Assistant Matron, 1 Dispenser, 2 Clerks, 15 Porters, etc., 7 Sisters, 37 Nurses, 51 Maids, 2 Teachers, 1 Handicrafts Instructor) ..	120
Gateforth Sanatorium (1 Matron, 1 Sister, 1 Assistant Nurse, 2 Probationer Nurses, 1 Cook, 7 Maids, 1 Working Foreman, 1 Handyman, 1 Gardener and 1 Labourer)	17
The Hollies Children's Sanatorium (1 Matron, 1 Sister, 3 Assistant Nurses, 2 Teachers, 1 Cook, 3 Maids, 1 Handyman)	12
Infants' Hospital, Wyther (1 Matron, 1 Sister, 1 Masseuse, 4 Staff Nurses, 13 Probationer Nurses, 1 Cook, 5 Maids, 2 Laundresses, 1 Handyman, 1 Gardener)	30
Red House Residential Nursery (1 Matron, 1 Sister, 9 Probationer Nurses, 1 Housemaid)	12
Cobden Place Day Nursery and Blenheim Hostel (1 Matron, 1 Home Sister, 1 Staff Nurse, 9 Probationer Nurses, 3 Maids)	15
The Factory-in-the-Field (1 Manager, 1 Clerk). Firewood Depart- ment:—(1 Foreman, 15 Men, 3 Drivers, 6 Travellers). Brush Department:—(1 Foreman, 4 Brushmakers, 1 Traveller). Printing Department:—(1 Foreman, 5 Printers), 1 Gardener, 1 Caretaker and Cook, 1 Assistant Cook	42

City of Leeds.

To the Chairman and Members of the Health Committee.

Ladies and Gentlemen,

The record of the city's health for the year 1932, if not up to the standard of the best, did not fall so far short of it as to occasion misgiving. Considering the depressed state of industry and the large amount of unemployment there is cause for gratification that the Public Health remained so good. There are signs, however, that the continuance of the lean times is beginning to have its effect on the children. It is the definite opinion of those members of the staff who are engaged in maternity and infant welfare work, and who therefore come into constant and intimate contact with mothers and their infants, that in recent years there has been a distinct deterioration in the quality and physique of the latter. This they attribute to two causes (1) undernourishment of the mother during pregnancy and (2) imperfect feeding of the child after birth. That is only an impression, but as it so happens, it is an impression which is supported by the infant mortality rate which in the last two years has been on the upgrade. In 1930 the rate was 68, in 1931, 76 and in 1932, 88. In none of these years was there any unusual occurrence in the shape of epidemic disease to account for the increase. One cannot therefore dismiss the impression as illusionary though for complete verification further and more definite data might be required.

The birth-rate continued its downward trend and reached a point lower than ever before which reflects two things, first, the unfavourable influence of the economic situation on family life, and secondly, the shrinking fertility of modern marriages. It is very striking how little the marriage rate has varied in the last

twenty years as compared with the birth-rate which in the same period has dropped more than 37 per cent. It would appear, therefore, that the need to-day is not to instruct young people how not to have children, but rather how to have them in sufficient number and of the best type possible to maintain a population numerically and physically effective. The disappearance of the family in its effect on the individual and the community is one of the most sinister and regrettable features of the age. That it should be encouraged, as it undoubtedly is being, for purely personal and private motives is greatly to be deplored.

To enhance still further the effect of the falling birth-rate the death-rate 13.3 remained stationary while the infant mortality rate 88 exceeded that of the previous year by 15.8 per cent. The nett results of these fluctuations was to reduce the natural increment of population for the year to 535 which is 67.4 per cent. below the average increment for the last ten years.

The maternal mortality rate 3.00 was the lowest of which there is a record. One cannot however place too much importance on this as the rate is one which is likely to be subject to considerable variation from year to year.

One of the most gratifying achievements of the year was the further decline of the death-rate from pulmonary tuberculosis. Here again another record was established and had it not been that the non-pulmonary rate was somewhat higher than usual the combined rates for the first time in the city's history would have been under one per thousand. In this connection I am happy to report that proposals are now under consideration and have in fact nearly reached completion for the rebuilding of the women's wards at Killingbeck Sanatorium. This much needed improvement will greatly add to the efficiency of the institutional provision for the treatment of the disease.

The year was remarkably free from epidemics, the only one worthy of note being that of influenza at the end of the fourth quarter which overflowed into the current year, and though comparatively mild in type was so widespread as to disorganise business and occasion considerable loss and inconvenience to employers. There is probably no disease which causes greater loss both in money and life to the community than influenza and so far it has eluded every attempt of medical science to intercept its ravages.

In the realm of housing there is little to report. A special Committee was set up towards the end of the year to enquire into the problem of slum clearance. After hearing evidence from various bodies and individuals interested in the subject a majority report was issued in November followed by a minority report three months later. The slum problem in Leeds is peculiar not so much because of the badness of the individual houses but because of their type and number. There is nothing quite to compare with it in any other town in England and short of complete demolition of all the unsatisfactory houses there seems to be no other way effectively of dealing with it.

A new problem or rather an old one lit up by the economic situation and the shortage of low rented working class houses is developing in our midst. I refer to the problem of the farmed out house, or more familiarly the house-let-in-lodgings. So rapidly is the number of these houses growing in the city and so inadequate are our powers of control that in a very short time we shall be faced with a situation which in magnitude, and its effects on the public health will be second only to the slum problem itself (vide page 214).

A movement so thoroughly subversive of hygienic principles and so alien to our present housing ideals cannot be allowed to grow unchecked and fresh legislation giving adequate powers of control to Local Authorities is urgently needed.

To the senior officers in charge of the various sub-departments who have assisted in compiling this report and to all members of the staff who have so willingly and loyally co-operated with me in the activities of the Department throughout the year I desire to express my sincere thanks.

To you, Mr. Chairman, and the members of the Health Committee, I am also indebted for your invariable courtesy and consideration.

I am,

Ladies and Gentlemen,

Your obedient Servant,

J. JOHNSTONE JERVIS.

Public Health Department,

Leeds,

August, 1933.

SUMMARY, 1932.

LATITUDE 53°48' North. LONGITUDE 1°32' West.

AVERAGE HEIGHT ABOVE SEA LEVEL 250 feet.

AREA OF CITY 38,105 Acres

POPULATION (Registrar-General's estimate) 484,900

ESTIMATED NUMBER OF HOUSES 132,113

RATEABLE VALUE £3,144,910

SUM REPRESENTED BY A PENNY RATE £12,063

Average.

1932. 1922-31.

BIRTH RATE (births per 1,000 living) 14·44 16·93

MARRIAGE RATE (persons married per 1,000 living) .. 15·48 16·20

DEATH RATE (deaths per 1,000 living) 13·34 13·47

NATURAL INCREASE OF POPULATION 535 1,643
(Excess of births over deaths in the year)

INFANT MORTALITY RATE 88 89
(Deaths under 1 year per 1,000 births)

DEATH RATE from Pneumonia and Bronchitis 1·64 2·07

„ „ Cancer 1·57 1·38

„ „ Diarrhoea and Enteritis (under 2 years)
per 1,000 births 15·13 12·31

	Cases.	Case- rate.	Deaths.	Death rate.
SCARLET FEVER 	931	1·92	8	0·02
DIPHTHERIA 	889	1·83	48	0·10
TYPHOID FEVER 	9	0·02	—	—
MEASLES 	3,626	7·48	52	0·11
PULMONARY TUBERCULOSIS ..	574	1·18	386	0·80
OTHER FORMS OF TUBERCULOSIS ..	162	0·33	107	0·22

Natural and Social Conditions.

NATURAL AND SOCIAL CONDITIONS.

Area.—The area of the city is 38,105 acres.

Population.—The Registrar General's estimate of the resident population at the mid year of 1932 was 484,900 and the allocation to the 26 wards of the city is given on page 22.

Since the publication of my annual report for 1931, the Registrar General's final analysis of the population of the city at the 1931 census has been received. According to this analysis the enumerated population is 482,809, which is 20 more than the provisional figure given in my last report. The total is made up of 225,933 males and 256,876 females which gives a ratio of males to females of 1,000 to 1,137 as compared with 1,000 to 1,087 for England and Wales. At the 1921 census the ratio in Leeds was 1,000 males to 1,126 females. The table on page 17 shows the population at previous censuses together with the percentage increases between succeeding decades. The fluctuations in the rate of increase in the population were shown graphically in my last annual report.

Population in Age Groups.—The grouping of the population in accordance with age and sex distribution is given in the table on page 18, and in another table on the same page is given the increase or decrease in age groups as compared with the previous census. The latter table bears out the truth of the statement made in previous reports that the population of the city as a whole is ageing. If one takes the aggregate of the age groups 0-1, 1-5, and 5-15, it will be noticed that as compared with the previous census there was a nett decrease of 12,248, whereas the aggregate of the age groups 25-45, 45-65, and 65+ show a nett increase in the same period of 34,191. Perhaps the most significant decrease is that in the age group 0-1 which in 1931 fell by as much as 2,205 or 24.1 per cent. Put in another and perhaps more striking way, in 1921 for every baby under one there were 2.6 persons over 65, while in 1931 for every baby under one there were 4.6 persons over 65.

LEEDS.

TABLE SHOWING THE ENUMERATED POPULATION AT EACH CENSUS
FROM 1801-1931.

Date of Census.	Population.	Increase per cent. on previous Census.		
1801	53,162	..		
1811	62,534	17·63		
1821	83,746	33·92		
1831	119,345	42·51		
1841	152,054	27·41		
1851	172,258	13·29		
1861	207,149	20·26		
1871	259,212	25·13		
1881	309,119	19·25	Population of the area as constituted at the 1931 Census.	Percentage Increase.
1891	367,505	18·89		
1901	428,968	16·72		
1911	445,550	3·87	458,823	..
1921	458,232	2·85	463,122	0·94
1931	482,809	5·36	482,809	4·25

In 1912, Roundhay, Shadwell, Seacroft and Crossgates (1911 Census population of 7,398) were added to Leeds.

In 1920, Middleton (1911 Census population of 1,207) was added to Leeds.

In 1926, Adel (1921 Census population of 987) was added to Leeds.

In 1928, Alwoodley, Eccup, Templenewsam and portion of Austhorpe (1921 Census populations of 205, 234, 3,393, and 71 respectively—total of 3,903) were added to Leeds.

The following table shows the constitution of the population in age groups at the 1931 census :—

1931 CENSUS POPULATIONS IN AGE GROUPS.

Sex.	Under 1	1 and under 5	5 and under 15	15 and under 25	25 and under 45	45 and under 65	65 and upwards	Total.
Males ..	3,493	13,489	36,438	40,283	68,806	49,662	13,762	225,933
Females ..	3,458	13,608	35,945	46,376	81,454	57,919	18,116	256,876
Total ..	6,951	27,097	72,383	86,659	150,260	107,581	31,878	482,809

CENSUS POPULATIONS IN AGE GROUPS.
1931 COMPARED WITH 1921.

Age Group.	1921.	1931.	Increase or Decrease.
Under 1 ..	9,156	6,951	— 2,205
1-5 ..	26,636	27,097	+ 461
5-15 ..	82,887	72,383	- 10,504
15-25 ..	84,025	86,659	+ 2,634
25-45 ..	139,711	150,260	+ 10,549
45-65 ..	92,028	107,581	+ 15,553
65+.. ..	23,789	31,878	+ 8,089
Total ..	458,232	482,809	+ 24,577

Dwelling-Houses and Families.—The total number of dwellings in the city at the 1931 census was 128,913 made up of 126,056 occupied, 1,816 vacant, and 1,041 vacant but furnished. The corresponding figures at the 1921 census were 108,534 occupied and 2,737 vacant, (the number of dwellings vacant but furnished was not given separately in the 1921 analysis) making a total of 111,271. The number of occupied dwellings at the end of 1932 was 130,528 and the number of unoccupied 1,585. The vacant

dwellings were mostly of the larger type situate in what were once the wealthy quarters of the city but the character of which in recent years, with the development of residential areas on the outskirts of the city, have changed in character.

The following table gives particulars of the dwellings, rooms and families in the city at the 1931 census together with the percentage increases as compared with the 1921 census.

DWELLINGS, ROOMS AND FAMILIES.

	1931.	1921.	Increase per cent.
Dwellings occupied	126,056	108,534	16·14
Dwellings wholly vacant—			
Furnished	1,041	2,737	4·38
Others	1,816		
Rooms occupied	532,923	454,125	17·35
Rooms unoccupied—			
Furnished	4,812	13,750	3·35
Others	9,398		
Private families	128,696	110,182	16·80
Population in private families	464,589	445,300	4·33
Excess of private families over occupied dwellings ..	2,640	1,648	60·19

From the preceding table it will be observed that while the number of private families has increased in the ten years by 16·80 per cent. the population in those families has only increased by 4·33 per cent., the explanation being that the size of family has been reduced from 4·04 in 1921 to 3·61 in 1931, or 10·6 per cent.

The distribution of the population in families is set out in the following table on page 20, from which it will be seen that in the ten years, 1921-1931, there has been an increase in the number of families consisting of 1, 2, 3 and 4 persons and a decrease in families over four persons. The greatest increase has been in families of two persons and the greatest decrease in families of 6 and 7 persons. The increasing predominance of the two and

three person families is brought out by the percentage distribution, which shows that in 1931 these two categories accounted for 48·1 per cent. of all families as compared with 40·5 per cent. in 1921, whereas the large families, comprising, say, eight persons or more, have been reduced from 6·1 per cent. in 1921 to 3·2 per cent. in 1931.

DISTRIBUTION OF PRIVATE FAMILIES ACCORDING TO NUMBER OF PERSONS IN FAMILY. CENSUSES 1921 AND 1931.

No. of Persons in family.	1931.	1921.	Increase or Decrease (-) 1921-1931.	Distribution per cent.	
				1931.	1921.
1	8,279	5,673	2,606	6·43	5·15
2	29,648	20,108	9,540	23·04	18·25
3	32,296	24,510	7,786	25·09	22·25
4	25,554	21,467	4,087	19·86	19·48
5	15,625	15,718	- 93	12·14	14·27
6-7 ..	13,189	15,946	- 2,757	10·25	14·47
8-9 ..	3,305	5,246	- 1,941	2·57	4·76
10 and over	800	1,514	- 714	0·62	1·37
TOTAL ..	128,696	110,182	18,514	100·00	100·00

Overcrowding.—If the standard of overcrowding is taken as more than two persons per room the position in Leeds at the 1931 census was decidedly better than it was at the 1921 census.

The following table gives the number of families living with a density of more than two persons per room and the population in such families, and for comparison the figures for the 1921 census are included.

LEEDS CENSUS 1931.

	1931.	1921.
Private families with density of more than two persons per room	5,640	7,370†
Percentage to total private families	4·4	6·7
Population in such families	38,147	53,460
Percentage to total private family population	8·2	12·0

† Approximate.

It will be seen that the number of "overcrowded" families has been reduced by 1,730 and the population therein by 15,313.

The census figures for 1931 also show that there were at the date of the census 1,427 dwellings occupied by two private families and 423 dwellings occupied by three or more private families. The corresponding figures for the previous census (1921) were 1,139 dwellings by two private families and 196 by three or more families. In addition, at the 1931 census, there were 17 families of ten persons, 86 families of nine persons, 161 families of eight persons and 443 families of seven persons all occupying two rooms, as compared with 30 families of ten persons, 68 families of nine persons, 197 families of eight persons, and 464 families of seven persons occupying two rooms at the 1921 census.

The Registrar General's method of assessing overcrowding is difficult of application to the oldest type of back-to-back house in Leeds with a living room and one bedroom, that is, unless the living room is to be used for sleeping as well as living purposes. The latter in my opinion is hygienically undesirable; indeed in actual practice it is only in times of illness or where the overcrowding is gross, that the living room is used as a bedroom. The implication is that a house of the type mentioned becomes overcrowded, at least in a moral sense, as soon as the family exceeds two and a half persons (a child under 10 years being regarded as half a person) and when the size of the family is over three persons it is overcrowded not only in the moral but also in the numerical sense. Judged on this basis the overcrowding in Leeds is a good deal worse than the Registrar General's figures would appear to show. Neither cubic capacity nor floor area offers a suitable basis for the estimation of the number of persons a house will accommodate. There are some houses in Leeds of the large residential type which have been converted into flats for the working classes or let-in-lodgings, where judged by either of these standards the rooms would accommodate six or even more persons without being overcrowded. On a moral basis however these rooms are grossly and indecently overcrowded. A suitable standard by which to judge overcrowding is badly needed but any standard which fails to take into account the moral aspect is bound to be unsatisfactory.

For further particulars on overcrowding, see page 235.

POPULATION IN WARDS.

MUNICIPAL WARD.	Census, April 26th, 1931	Estimated Population middle of 1932.
Mill Hill and South	15,672	15,778
Westfield	19,455	19,588
Blenheim	22,947	22,952
Central	20,985	21,084
Woodhouse	18,689	18,771
North	15,475	15,529
Far Headingley	18,251	18,276
Hyde Park	16,548	16,522
Kirkstall	19,582	19,636
Burmantofts	22,974	23,125
Harehills	19,724	19,764
Potternewton	19,631	19,663
Roundhay	15,151	15,207
Cross Gates and Templenewsam	14,439	14,502
Richmond Hill	24,260	24,449
Osmondthorpe	21,570	21,760
East Hunslet	18,370	18,476
Hunslet Carr and Middleton	19,916	20,102
West Hunslet	18,044	18,098
Beeston	15,220	15,243
Holbeck (South)	14,324	14,357
Holbeck (North)	18,241	18,370
Armley and New Wortley ..	20,181	20,273
Upper Armley	16,953	17,014
Bramley	17,631	17,684
Farnley and Wortley	18,576	18,677
City	482,809	484,900

Rateable Value.—The rateable value of the city in 1932 was £3,144,910 and the estimated product of a penny rate £12,063. The corresponding figures for 1931 were £3,085,757 and £11,831.

Principal Industries.—The principal industries in the city remained as in previous years, namely, ready-made clothing, woollen, leather, boot and shoe, printing, dyeing, engineering and iron and steel.

Owing to the prevailing economic depression the engineering and iron and steel trades had a particularly bad year. The woollen, leather, boot and shoe and dyeing were more fortunate, while the most fortunate of all was the ready-made clothing and printing trades.

Unemployment continued to show no signs of betterment during the year. The average number of persons registered as wholly or partially unemployed during 1932 was 36,917 as compared with 37,397 for 1931. In January 1932 the number was 35,044, in March, 31,524, in August 41,018 and in December 37,309.

Notwithstanding this large amount of unemployment and the consequent distress which must necessarily accompany it, the health of the city generally, with the exception, perhaps, of very young children, remained good.

Meteorological Conditions.—The hours of bright sunshine registered in the city during the year was 992.92 as compared with 1,031.83 for the previous year and an average of 1,188.92 for the previous five years. The sunniest month was June with a daily average of 4.67 hours of bright sunshine and the darkest November with a daily average of 1.04 hours. The daily average for the whole year was 2.71 hours as compared with 2.83 hours for the previous year.

The total rainfall was 21.83 inches as compared with 32.78 inches in 1931 and an average of 30.31 inches for the previous quinquennium. The driest month was June with a total of 0.29 inches and the wettest July with a total of 3.39 inches. Taking the four quarters of the year, the rainfall in the first quarter was 3.43 inches; in the second, 6.12; in the third, 6.68; and in the fourth, 5.60.

The month with the highest average temperature was August with 65.63 degrees and the lowest February with 42.65 degrees. The average temperature for the whole year was 52.51 degrees as compared with 51.50 for the previous year.

It would therefore appear that whilst the year was one of the driest on record it certainly was not one of the sunniest. The explanation probably is that though the rainfall was well within the average there was more than an average amount of cloud and mist.

National Health Insurance Acts.—The total number of insured persons in the city under the National Health Insurance Acts on December 31st, 1932 was 218,357 as compared with 217,297 on January 1st. The number of doctors, including assistants, on the panel at the end of the year was 237 and the number of prescriptions dispensed was 1,094, 314. The corresponding figures for the previous year were 233 and 1,075,132.

VITAL STATISTICS.

Marriages.—The number of marriages which took place in Leeds during the year was 3,754 corresponding to a marriage rate of 15.5 as compared with 15.6 for the previous year and an average of 16.4 for the previous five years. The marriage rate of England and Wales for 1932 was 15.2 and for 1931, 15.6.

MARRIAGE AND BIRTH-RATES 1911-1932.

Year.	No. of Marriages.	Marriage rate per 1,000 Population.	No. of Births.	Birth-rate per 1,000 Population.
1911	3,717	15.7	10,562	23.8
1912	3,801	16.0	10,309	23.1
1913	3,925	16.4	10,877	23.4
1914	4,008	16.6	10,652	23.3
1915	4,858	20.2	9,877	21.5
1916	3,701	15.5	9,432	21.1
1917	3,300	14.2	7,566	17.3
1918	3,710	15.5	7,392	17.3
1919	5,083	21.2	7,564	17.6
1920	5,620	23.5	11,229	25.0
1921	4,566	18.7	10,144	21.8
1922	4,183	17.2	9,253	19.8
1923	4,001	16.3	8,684	18.5
1924	4,023	16.3	8,558	18.1
1925	3,807	15.4	8,180	17.3
1926	3,644	14.8	8,065	17.0
1927	4,028	16.7	7,790	16.3
1928	3,927	16.5	7,665	16.1
1929	3,990	16.7	7,426	15.5
1930	3,948	16.5	7,568	15.8
1931	3,802	15.6	7,219	14.8
1932	3,754	15.5	7,004	14.4

Births.—The births registered during the year numbered 7,368 comprising 3,811 males and 3,557 females. Of these 272 males and 218 females born to parents not belonging to Leeds were transferred out, whilst 61 males and 65 females born outside the city to Leeds parents were transferred in, making a nett total of 7,004 births comprising 3,600 males and 3,404 females. Compared with the previous year this represents a decrease of 111 males and 104 females or a total decrease of 215.

The birth-rate was 14·4 as compared with 14·8 for the previous year and an average of 15·7 for the previous five years. This is the lowest birth-rate every recorded in the city. The table appended gives the marriage and birth rates for the years 1911-1932 and it will be noticed that there was a further decrease in both rates in 1932 but more marked in the latter than in the former.

The chart opposite page 26 shows the marriage and birth rates for the years 1904-1932.

An examination of the tables on pages 27 and 36 in which are set out the birth-rates and death-rates for the 26 wards of the city discloses the fact that in ten of the wards, *e.g.*, Blenheim, Far Headingley, Hyde Park, Kirkstall, Harehills, Potternewton, West Hunslet, Beeston, Holbeck (South) and Bramley the death-rate actually exceeded the birth-rate. Last year there were seven wards in which this occurred, namely, Blenheim, Hyde Park, Kirkstall, Harehills, Potternewton, Beeston and Holbeck (South) all of which it will be noted again achieved the same distinction in 1932. That there should be this discrepancy in a ward of the type and constitution of Far Headingley occasions no surprise, but when it occurs in wards which are of purely working-class character such as Kirkstall, West Hunslet, Beeston and Holbeck (South) one is compelled to pause and ask the reason why. The explanation probably is, as I have pointed out in previous reports, that, for economic reasons, the fashion of restricting the size of family has now definitely been adopted by the more intelligent section of the working classes who in doing so have simply followed the lead of their well-to-do neighbours, though with regard to the latter the explanation is less convincing. Whether this be the correct explanation or not the final effect is to bring nearer the time when its losses will exceed its gains and the population will become recessive instead of progressive.

Compared with the other large town in England and Wales Leeds had the lowest birth-rate with the exception of London and Bradford.

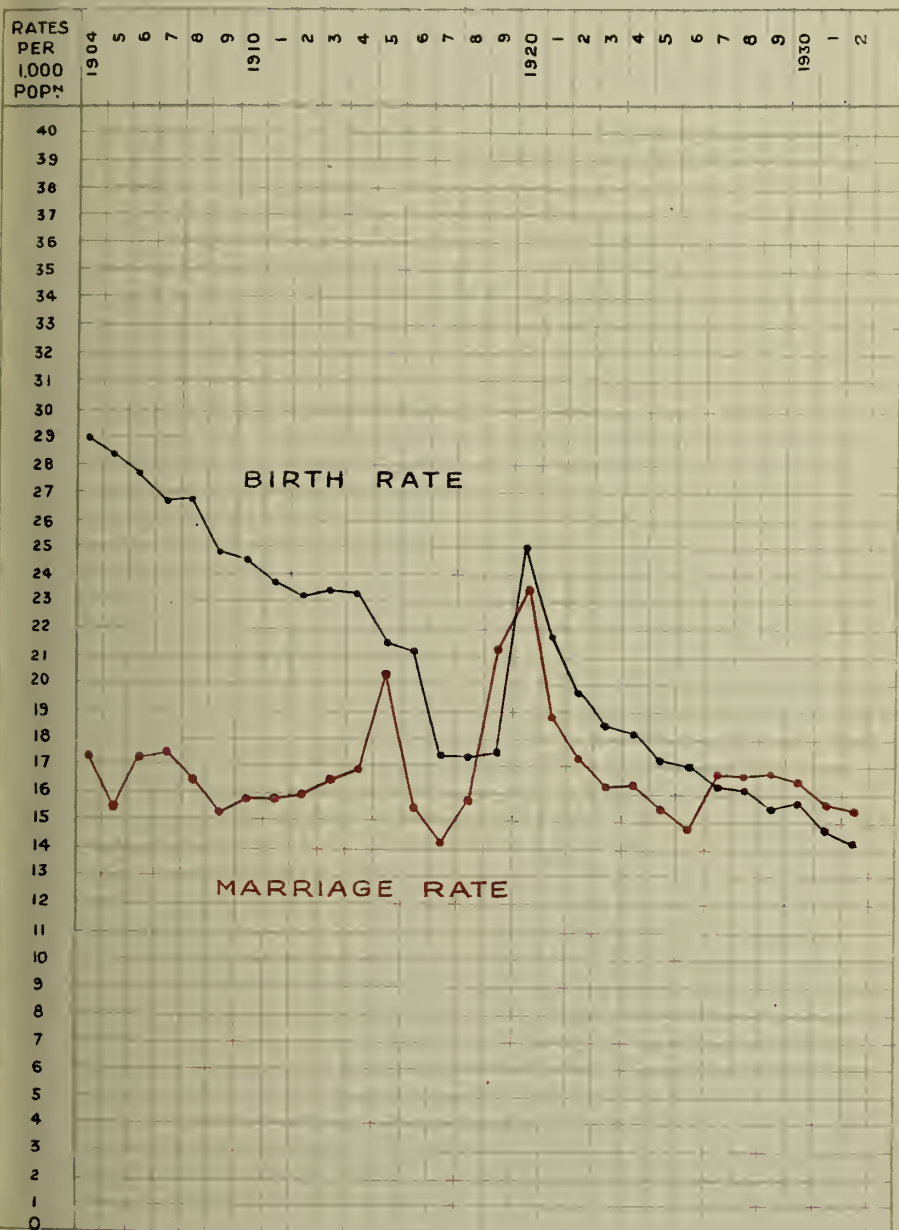
BIRTH RATE.

Year.	No. of births.	Birth rate, LEEDS.	England and Wales.
1890-1894	62,270	33·2	30·5
1895-1899	63,873	31·5	29·6
1900-1904	64,791	30·1	28·4
1905-1909	59,117	26·9	26·7
1910-1914	53,267	23·6	24·2
1915-1919	41,831	19·0	19·4
1920	11,229	25·0	25·5
1921	10,144	21·8	22·4
1922	9,253	19·8	20·4
1923	8,684	18·5	19·7
1924	8,558	18·1	18·8
1925	8,180	17·3	18·3
1926	8,065	17·0	17·8
1927	7,790	16·3	16·7
1928	7,665	16·1	16·7
1929	7,426	15·5	16·3
1930	7,568	15·8	16·3
1931	7,219	14·8	15·8
1932	7,004	14·4	15·3

BIRTH RATE IN QUARTERS.

	I.	II.	III.	IV.	Year.
1922	21·2	20·7	19·5	17·9	19·8
1923	18·9	19·5	18·1	17·4	18·5
1924	18·7	18·4	18·7	16·8	18·1
1925	17·0	19·0	17·5	15·7	17·3
1926	17·0	18·5	17·2	15·5	17·0
1927	17·0	17·3	15·6	15·4	16·3
1928	16·0	17·6	15·1	14·9	16·1
1929	15·7	16·2	16·2	14·0	15·5
1930	16·0	16·6	16·1	14·6	15·8
1931	15·3	16·2	14·7	13·2	14·8
1932	14·2	16·0	14·5	13·2	14·4

BIRTH RATE AND MARRIAGE RATE. 1904 - 1932.





BIRTHS AND BIRTH RATE IN WARDS.

MUNICIPAL WARD.	Estimated Population middle of 1932.	Nett births.	Birth- rate.	Illegiti- mate births.	Percentage of illegitimate births to total births.
Mill Hill and South ..	15,778	282	17·87	23	8·2
Westfield	19,588	389	19·86	27	6·9
Blenheim	22,952	280	12·20	42	15·0
Central	21,084	359	17·03	36	10·0
Woodhouse.. ..	18,771	274	14·60	14	5·1
North	15,529	201	12·94	7	3·5
Far Headingley ..	18,276	162	8·86	9	5·6
Hyde Park.. ..	16,522	149	9·02	9	6·0
Kirkstall	19,636	251	12·78	14	5·6
Burmantofts	23,125	397	17·17	14	3·5
Harehills	19,764	235	11·89	8	3·4
Potternewton ..	19,663	192	9·76	13	6·8
Roundhay	15,207	170	11·18	6	3·5
Cross Gates and Temple- newsam	14,502	162	11·17	8	4·9
Richmond Hill ..	24,449	507	20·74	30	5·9
Osmondthorpe ..	21,760	367	16·87	10	2·7
East Hunslet	18,476	282	15·26	17	6·0
Hunslet Carr & Middleton	20,102	367	18·26	8	2·2
West Hunslet	18,098	245	13·54	5	2·0
Beeston	15,243	170	11·15	7	4·1
Holbeck (South) ..	14,357	177	12·33	4	2·3
Holbeck (North) ..	18,370	343	18·67	21	6·1
Armley and New Wortley	20,273	296	14·60	11	3·7
Upper Armley	17,014	227	13·34	13	5·7
Bramley	17,684	255	14·42	5	2·0
Farnley and Wortley ..	18,677	265	14·19	9	3·4
City	484,900	7,004	14·44	370	5·3

Births in Wards.—The distribution of the births in the various wards is shown in the table on page 27. In eleven of the wards namely, Richmond Hill, Westfield, Holbeck (North), Hunslet Carr and Middleton, Mill Hill and South, Burmantofts, Central, Osmondthorpe, East Hunslet, Armley and New Wortley, and Woodhouse, the birth-rate was higher than for the city as a whole, whilst in the remainder, Bramley, Farnley and Wortley, West Hunslet, Upper Armley, North, Kirkstall, Holbeck (South), Blenheim, Harehills, Roundhay, Cross Gates and Templenewsam, Beeston, Potternewton, Hyde Park and Far Headingley it was lower. The wards with the highest rates were in order, Richmond Hill, Westfield, Holbeck (North) and Hunslet Carr and Middleton, all of which were above 18 and averaged 19.5, whilst those with the lowest were Potternewton, Hyde Park and Far Headingley with a rate under 10 and averaging 9.2.

Birth-Rate in Quarters.—The highest rate was in the second quarter, 16.0, and the lowest in the fourth, 13.2, whilst in the first and third it was 14.2 and 14.5.

Excess of Births over Deaths.—The excess of births over deaths or what is generally spoken of as the “natural increase of the population” was 535 as compared with 713 in 1931 and an average of 1,643 for the previous ten years.

For the last seven years investigations have been made as to the size of family into which children have been born and the table on page 30 gives the results of those investigations. It will be observed that whereas in 1926, 71.4 per cent. of the births investigated were into families of two children and under, the percentage in 1932 rose to 75.9; on the other hand, the percentage of births occurring in families of more than six children fell from 6.2 in 1926 to 4.6 in 1932. In this connection it is interesting to recall that at the 1931 census there was a definite drop in the number of families of six and more than six persons.

Illegitimate Births.—Of the 7,004 (nett) births registered, 6,634 (3,410 males, 3,224 females) or 94.7 per cent. were legitimate and 370 (190 males, 180 females) or 5.3 per cent. were illegitimate. The ratio of illegitimate to legitimate was 1 to 18 as compared with 1 to 19 for the previous year.

BIRTH RATE, 1890 - 1932.



ILLEGITIMATE BIRTHS.

YEAR.	Illegitimate births.	Percentage of nett births registered.	Rate per 1,000 estimated population.
1922 ..	511	5.5%	1.09
1923 ..	438	5.0%	0.93
1924 ..	423	4.9%	0.90
1925 ..	422	5.2%	0.89
1926 ..	434	5.4%	0.92
1927 ..	371	4.8%	0.78
1928 ..	390	5.1%	0.82
1929 ..	410	5.5%	0.86
1930 ..	374	4.9%	0.78
1931 ..	358	5.0%	0.74
1932 ..	370	5.3%	0.76

Reference to the illegitimate death rate will be found on pages 130 and 133.

Stillbirths.—The number of stillbirths registered during the year was 397, comprising 230 males and 167 females. The inward transfers numbered 5, namely 3 males and 2 females, and the outward transfers 68, namely 43 males and 25 females, which after adjustment leaves a nett total of 334, made up of 190 males and 144 females. The rate per thousand of the population was 0.69 as compared with 0.75 for the previous year. The rate for England and Wales was 0.66. Expressed as a percentage of the total births (nett) the rate was 4.6 as compared with 4.8 for the previous year. Of the 334 (nett) stillbirths, 306, or 91.6 per cent. were legitimate and 28, or 8.4 per cent. illegitimate. The ratio of registered “still” to registered “live” births was 1 to 21 as

BIRTHS OCCURRING IN ORDER OF SIZE OF FAMILY.

	1926.		1927.		1928.		1929.		1930.		1931.		1932.	
	Births.	Percent- age.	Births.	Percent- age.	Births.	Percent- age.	Births.	Percent- age.	Births.	Percent- age.	Births.	Percent- age.	Births.	Percent- age.
No children	2,645	33.03	2,633	34.04	2,673	35.32	2,632	35.47	2,608	35.73	2,604	37.86	2,480	36.90
1 child	1,924	24.03	1,787	23.11	1,725	22.79	1,771	23.87	1,784	24.44	1,642	23.87	1,694	25.20
2 children	1,152	14.39	1,148	14.84	1,100	14.53	1,062	14.31	1,039	14.23	927	13.48	928	13.81
3 "	771	9.63	759	9.81	694	9.17	653	8.80	635	8.70	581	8.45	554	8.24
4 "	498	6.22	482	6.23	466	6.16	446	6.01	414	5.67	385	5.60	324	4.82
5 "	325	4.06	314	4.06	313	4.14	289	3.89	287	3.93	271	3.94	258	3.84
6 "	196	2.45	198	2.56	191	2.52	212	2.86	197	2.70	163	2.37	175	2.60
7 "	166	2.07	144	1.86	137	1.81	127	1.71	105	1.44	113	1.64	113	1.68
8 "	122	1.52	88	1.14	103	1.36	90	1.21	95	1.30	72	1.05	78	1.16
9 "	86	1.07	68	0.88	53	0.70	58	0.78	59	0.81	53	0.77	44	0.65
10 "	54	0.67	47	0.61	59	0.78	41	0.55	31	0.42	26	0.38	24	0.36
11 "	35	0.44	29	0.37	27	0.36	20	0.27	25	0.34	16	0.23	22	0.33
12 "	20	0.25	20	0.26	15	0.20	9	0.12	11	0.15	12	0.17	17	0.25
13 "	3	0.04	6	0.08	8	0.11	6	0.08	1	0.01	7	0.10	9	0.13
14 "	4	0.05	4	0.05	3	0.04	2	0.03	5	0.07	3	0.04	1	0.01
15 "	4	0.05	4	0.05	1	0.01	1	0.01	1	0.01	2	0.03	..	..
16 "	3	0.04	1	0.01	1	0.01	..	..	3	0.04	1	0.01	..	..
17 "	..	..	2	0.03	..	..	1	0.01	..	..	..	..	..	..
Total births investigated	8,008	100	7,734	100	7,569	100	7,420	100	7,300	100	6,878	100	6,721	100

compared with 1 to 20 in 1931. Details respecting the notification and visitation of births are given on pages 147 and 153.

Deaths.—The gross number of deaths registered during the year was 6,771 comprising 3,578 males and 3,193 females, giving a crude death-rate of 14·0 as compared with 14·0 for the previous year and an average of 14·3 for the previous five years. The inward transfers numbered 248, namely 134 males and 114 females, and the outward transfers 550, namely 337 males and 213 females, which after adjustment leaves a nett total of 6,469 deaths debitable to the city, made up of 3,375 males and 3,094 females. The corresponding death-rate (nett) was 13·3 as compared with 13·4 for the previous year and an average of 13·6 for the previous five years.

Amongst the thirteen large towns in England and Wales, Leeds had the highest death-rate with the exception of Bradford.

The death-rate for England and Wales was 12·0 or 9·8 per cent. less than Leeds.

Death-Rate in Quarters.—The death-rate for the first quarter was 15·8; for the second, 13·3; for the third, 10·6; and for the fourth, 13·6.

DEATH RATE IN QUARTERS.

	I.	II.	III.	IV.	Year.
1922	17·5	14·6	10·6	12·9	13·9
1923	14·7	13·4	10·6	12·4	12·7
1924	22·4	12·9	9·9	12·2	14·3
1925	14·8	11·4	10·8	14·1	12·8
1926	15·7	12·7	9·9	13·1	12·8
1927	17·5	12·2	10·1	12·2	13·0
1928	14·6	13·0	10·2	13·9	12·9
1929	29·2	14·2	11·0	11·9	16·5
1930	14·1	11·8	10·5	13·2	12·4
1931	17·4	13·1	10·6	12·5	13·4
1932	15·8	13·3	10·6	13·6	13·3

Death-Rates in Wards.—The table on page 36 gives the deaths and death-rates of the 26 wards of the city. The wards with the highest death-rates were Richmond Hill (16·2), Westfield (16·1), and Blenheim (15·3), whilst those with the lowest were Cross Gates and Templenewsam (10·2), Far Headingley (10·7) and Roundhay (10·7). The difference between the highest and the lowest, that is between Richmond Hill and Cross Gates and Templenewsam, amounted to 6·0 per thousand, or 58·8 per cent., whilst that between the highest and the city was 2·9 per thousand, or 21·8 per cent.

Causes of Death.—The principal causes of death were in order of numerical importance, organic heart disease, cancer, pneumonia and arterio sclerosis which together accounted for 46·0 per cent. of the total deaths. Last year this group of diseases was responsible for 44·8 per cent. of the total deaths.

Diseases of the respiratory system including pneumonia, bronchitis and influenza, but excluding pulmonary tuberculosis, accounted for 966 or 14·9 per cent. of the total deaths from all causes. Last year this group was responsible for 16·1 per cent. of the total deaths and the percentage for the previous five years was 18·1. The number of children under five years of age who died from respiratory diseases in 1932 was 214 or 24·6 per cent. of the total deaths under five, as compared with 223, or 26·5 per cent. for the previous year and an average of 239 or 25·6 per cent. for the previous five years.

For notes on infantile diarrhoea, bronchitis, pneumonia and tuberculosis, see pages 62, 68, 66 and 98.

Deaths from Street Accidents.—The number of street accidents having a fatal termination during the year was 78 of which 75, or 96·2 per cent. were due to motor vehicles. Last year the number was 71 of which 63, or 88·7 per cent., were due to this cause.

On examining the table appended it will be seen that 35, or 44·9 per cent. of the total deaths were amongst children under 15 years and adults over 65, whilst 43, or 55·1 per cent. were in the age groups between 15 and 65. These figures represent an increase of nine in the number of deaths of children and adults over 65 and a decrease of 2 in the age groups between 15 and 65 as compared with the previous year.

DEATHS FROM VEHICULAR TRAFFIC OF LEEDS PEOPLE IN AGE
GROUPS, 1911-1932.

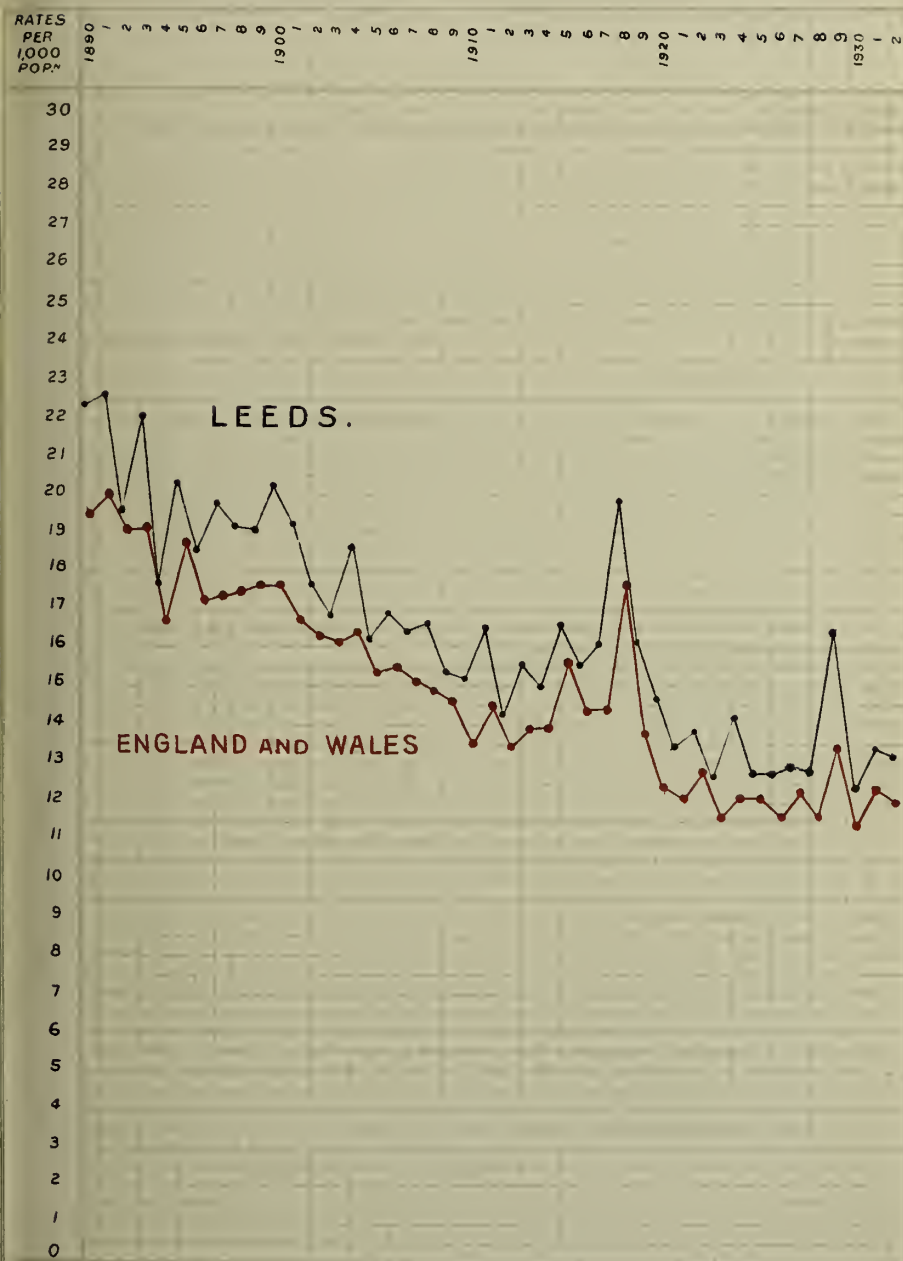
Year.	-5	5-15	15-25	25-45	45-65	65+	Totals.
1911	4	6	2	2	1	2	17
1912	2	3	2	3	2	2	14
1913	1	5	2	6	9	5	28
1914	1	2	4	4	7	7	25
1915	1	11	2	5	8	7	34
1916	2	4	2	3	10	6	27
1917	4	8	3	7	8	7	37
1918	3	4	3	2	11	6	29
1919	1	8	—	1	13	7	30
1920	—	3	6	8	5	5	27
1921	3	9	3	3	1	7	26
1922	3	10	2	5	8	2	30
1923	2	6	7	7	12	6	40
1924	5	9	6	5	7	7	39
1925	5	7	6	5	6	5	34
1926	6	12	7	8	17	12	62
1927	4	20	9	6	13	5	57
1928	2	10	6	14	14	12	58
1929	2	11	13	10	9	10	55
1930	8	12	9	8	19	19	75
1931	4	10	12	14	19	12	71
1932	6	10	10	15	18	19	78

ANNUAL DEATHS AND DEATH RATE.

Year.	Population.	Nett deaths.	Death-rate LEEDS.	Death-rate England and Wales.
1901	429,383	8,204	19·2	16·9
1902	431,043	7,699	17·6	16·3
1903	432,703	7,263	16·8	15·5
1904	434,363	8,039	18·6	16·3
1905	436,023	7,047	16·2	15·3
1906	437,683	7,350	16·9	15·5
1907	439,343	7,167	16·4	15·1
1908	441,003	7,430	16·6	14·8
1909	442,663	6,806	15·4	14·6
1910	444,323	6,711	15·2	13·5
1911	445,983	7,331	16·5	14·6
1912	447,746	6,396	14·3	13·3
1913	457,295	7,237	15·6	13·8
1914	459,260	6,885	15·0	14·0
1915	459,260	7,609	16·6	15·7
1916	446,349	6,946	15·6	14·4
1917	438,254	7,052	16·1	14·4
1918	427,589	8,529	19·9	17·6
1919	430,834	6,992	16·2	13·7
1920	448,913	6,591	14·7	12·4
1921	465,500	6,285	13·5	12·1
1922	466,700	6,479	13·9	12·8
1923	469,900	5,986	12·7	11·6
1924	471,600	6,747	14·3	12·2
1925	472,900	6,037	12·8	12·2
1926	473,400	6,062	12·8	11·6
1927	477,600	6,198	13·0	12·3
1928	474,800*	6,133	12·9	11·7
1929	478,500	7,898	16·5	13·4
1930	478,500	5,930	12·4	11·4
1931	486,400	6,506	13·4	12·3
1932	484,900	6,469	13·3	12·0

* Population adjusted to allow for change in boundary during the year. The mid-year population after the change is 476,500.

DEATH RATE, 1890 - 1932



Deaths in Age Groups.—The table on page 39 sets out the deaths according to age groups. The aggregate number of deaths of children in the age groups 0-1, 1-2, and 2-5 was 870, or 13·4 per cent., of the total deaths as compared with 843, or 13·0 per cent., for the previous year, and an average of 932, or 14·3 per cent., for the previous five years. The table also shows that the deaths of persons under 45 years numbered 1,930, or 29·8 per cent., of the total deaths as compared with 1,988, or 30·6 per cent., for the previous year. Of the remaining deaths, 1,791, or 27·7 per cent., occurred in the age groups 45-65, whilst 2,748, or 42·5 per cent., were in the age group 65+.

It is worthy of note that the percentage of deaths of persons over 65 years of age in 1932 was higher than in any previous year of which we have record. This is as it ought to be though one must still deplore the comparatively large number of lives lost under the age of 15. Last year this figure amounted to no less than 1,025 or 15·8 per cent. of the total deaths.

COMPARISON OF PERCENTAGES OF DEATHS IN THE VARIOUS AGE GROUPS OF 1932, AS COMPARED WITH THE PREVIOUS DECENNIUM.

Period.	-1	1-2	2-5	5-15	15-25	25-45	45-65	65+
1922—1931 ..	11·2	3·1	2·7	2·6	4·3	11·5	27·7	36·9
Year 1932 ..	9·5	1·7	2·2	2·4	3·8	10·2	27·7	42·5
Decrease -	-1·7	-1·4	-0·5	-0·2	-0·5	-1·3	±	—
Increase +	—	—	—	—	—	—	±	+5·6

Infant Mortality.—The number of deaths of children under one year of age numbered 617, or 9·5 per cent. of the total deaths. The infant mortality rate corresponding was 88 per thousand births or 12 more than the previous year (76) and 8 more than the average of the previous five years (80).

This subject is dealt with in detail on page 126.

DEATHS AND DEATH RATE IN WARDS.

MUNICIPAL WARD.	Area in Acres.	Estimated population middle of 1932.	Nett deaths.	Death- rate.
Mill Hill and South.. ..	574	15,778	228	14.5
Westfield	234	19,588	315	16.1
Blenheim	443	22,952	352	15.3
Central	312	21,084	315	14.9
Woodhouse	436	18,771	254	13.5
North	5,038	15,529	198	12.8
Far Headingley	5,386	18,276	195	10.7
Hyde Park	468	16,522	228	13.8
Kirkstall	1,071	19,636	258	13.1
Burmantofts	274	23,125	322	13.9
Harehills	655	19,764	260	13.2
Potternewton	470	19,663	225	11.4
Roundhay	3,877	15,207	163	10.7
Cross Gates and Temple- newsam	5,593	14,502	148	10.2
Richmond Hill	260	24,449	397	16.2
Osmondthorpe	1,455	21,760	246	11.3
East Hunslet	366	18,476	235	12.7
Hunslet Carr and Middleton	2,657	20,102	242	12.0
West Hunslet	206	18,098	251	13.9
Beeston	1,166	15,243	196	12.9
Holbeck (South)	306	14,357	194	13.5
Holbeck (North)	383	18,370	274	14.9
Armley and New Wortley ..	565	20,273	261	12.9
Upper Armley	945	17,014	221	13.0
Bramley	2,114	17,684	259	14.6
Farnley and Wortley	2,851	18,677	232	12.4
City	38,105	484,900	6,469	13.3

PRINCIPAL CAUSES OF DEATH.

Death rate.	Diseases.	No. of deaths in 1932 (nett).	Increase or decrease compared with 1931.	Houses.	
				Through.	Back-to-back.
..	Enteric Fever .. ..	..	- 2	..	..
..	Small-pox .. ..	..	..	..	..
0.11	Measles	52	- 4	14	38
0.02	Scarlet Fever	8	- 4	2	6
0.08	Whooping Cough	41	- 2	13	28
0.10	Diphtheria	48	- 38	16	32
0.24	Influenza	116	- 9	64	52
0.05	Erysipelas	22	- +	11	11
0.80	Pulmonary Tuberculosis ..	386	- 53	133	249
0.22	Other Tuberculous Diseases	107	+ 19	37	70
1.57	Cancer, malignant disease	760	+ 20	340	416
0.05	Rheumatic Fever	24	- 5	11	13
0.06	Meningitis	27	+ 5	10	17
0.81	Cerebral Hæmorrhage ..	393	+ 56	164	229
2.53	Organic Heart Disease ..	1,225	+ 37	544	672
1.01	Arterio-sclerosis	492	+ 5	209	282
0.62	Bronchitis	299	- 56	115	184
1.02	Pneumonia (all forms) ..	497	- 3	165	331
0.11	Other diseases of respiratory organs	54	- 13	29	24
0.25	Diarrhœa and Enteritis ..	122	+ 24	37	85
0.08	Appendicitis and Typhlitis	37	+ 11	19	18
0.03	Cirrhosis of Liver	14	- 2	11	3
0.33	Nephritis and Bright's Disease	160	- 14	62	98
0.02	Puerperal Fever	8	- 9	3	5
0.03	Other accidents and diseases of Pregnancy and Parturition	13	- 9	9	4
0.38	Congenital Debility and Malformation, including Premature Birth ..	185	- 8	72	113
0.46	Violent Deaths, excluding Suicide	223	+ 16	93	127
0.16	Suicide	77	+ 12	31	45
2.22	Other Defined Diseases ..	1,077	- 10	484	590
0.00	Diseases ill-defined or unknown	2	- 1	..	2
13.34	Totals	6,469	- 37	2,698	3,744

Of the 6,469 deaths, 27 had no home.

CAUSES OF, AND AGES AT DEATH DURING THE CALENDAR YEAR, 1932.

CAUSES OF DEATH.	Nett Deaths at the subjoined ages of "Residents" whether occurring within or without the District.									Total Deaths whether of "Residents" or "Non-Residents" in Institutions in the District
	ALL AGES.	Under 1 year.	1 and under 2 years.	2 and under 5 years.	5 and under 15 years.	15 and under 25 years.	25 and under 45 years.	45 and under 65 years.	65 and upwards.	
1. Enteric Fever .. ..	..	..	..	..	..	..	..	..	..	2
2. Small-pox .. ..	..	..	..	..	..	..	..	..	..	..
3. Measles	52	17	20	13	2	..	..	..	..	32
4. Scarlet Fever	8	2	1	3	2	..	..	..	..	9
5. Whooping Cough	41	18	13	10	..	..	..	..	..	13
6. Diphtheria	48	2	1	15	26	3	1	..	..	51
7. Influenza	116	5	..	5	3	2	13	38	50	12
8. Erysipelas	22	4	2	1	..	1	3	4	7	15
9. Pulmonary Tuberculosis ..	386	..	..	1	2	82	151	131	19	191
10. Other Tuberculous Diseases	107	11	7	23	20	16	11	14	5	103
11. Cancer, malignant disease	760	..	..	..	2	..	72	345	341	361
12. Rheumatic Fever	24	..	..	..	4	6	7	5	2	6
13. Meningitis	27	6	2	5	6	1	1	2	4	19
14. Cerebral Hæmorrhage, &c...	393	..	..	..	2	..	5	128	258	150
15. Organic Heart Disease ..	1,225	1	..	1	7	15	77	359	765	333
16. Arterio-sclerosis	492	..	..	..	..	..	..	72	420	258
17. Bronchitis	209	23	5	2	1	1	12	71	184	70
18. Pneumonia (all forms) ..	497	106	28	33	22	21	56	124	107	248
19. Other diseases of respiratory organs	54	4	1	2	..	2	6	12	27	28
20. Diarrhoea and Enteritis ..	122	94	12	..	1	3	2	4	6	94
21. Appendicitis and Typhlitis	37	..	..	3	5	4	7	15	3	47
22. Cirrhosis of Liver	14	..	..	..	1	..	..	10	3	8
23. Nephritis and Bright's Disease	160	..	..	1	2	9	19	62	67	75
24. Puerperal Fever	8	..	..	..	..	2	6	..	..	12
25. Other accidents and diseases of Pregnancy and Parturition	13	..	..	..	..	2	11	..	..	18
26. Congenital Debility and Malformation, including Premature Birth ..	185	181	..	1	2	1	..	..	..	138
27. Violent Deaths, excluding Suicide	223	12	3	11	18	27	42	46	64	190
28. Suicide	77	..	..	..	..	4	31	27	15	13
29. Other Defined Diseases ..	1,077	131	14	14	27	44	125	321	401	670
30. Diseases ill-defined or unknown	2	..	..	..	..	..	1	1	..	3
Totals	6,469	617	109	144	155	246	659	1,791	2,748	3,160

DEATHS IN AGE GROUPS (NETT), 1922-1932.

Together with the percentage of the total deaths, represented by each group
(in italics).

Year.	Under 1	1-2	2-5	5-15	15-25	25-45	45-65	65+	Total.
1922	935 <i>14.4%</i>	283 <i>4.4%</i>	211 <i>3.3%</i>	198 <i>3.1%</i>	282 <i>4.4%</i>	766 <i>11.8%</i>	1,661 <i>25.6%</i>	2,143 <i>33.1%</i>	6,479
1923	773 <i>12.9%</i>	189 <i>3.2%</i>	153 <i>2.6%</i>	166 <i>2.8%</i>	277 <i>4.6%</i>	751 <i>12.5%</i>	1,620 <i>27.1%</i>	2,057 <i>34.4%</i>	5,986
1924	921 <i>13.7%</i>	270 <i>4.0%</i>	202 <i>3.0%</i>	173 <i>2.6%</i>	275 <i>4.1%</i>	786 <i>11.6%</i>	1,804 <i>26.7%</i>	2,316 <i>34.3%</i>	6,747
1925	748 <i>12.4%</i>	177 <i>2.9%</i>	161 <i>2.7%</i>	159 <i>2.6%</i>	297 <i>4.9%</i>	709 <i>11.7%</i>	1,657 <i>27.4%</i>	2,129 <i>35.3%</i>	6,037
1926	748 <i>12.3%</i>	206 <i>3.4%</i>	190 <i>3.1%</i>	158 <i>2.6%</i>	251 <i>4.1%</i>	676 <i>11.2%</i>	1,658 <i>27.4%</i>	2,175 <i>35.9%</i>	6,062
1927	629 <i>10.1%</i>	204 <i>3.3%</i>	160 <i>2.6%</i>	183 <i>3.0%</i>	246 <i>4.0%</i>	714 <i>11.5%</i>	1,711 <i>27.6%</i>	2,351 <i>37.9%</i>	6,198
1928	606 <i>9.9%</i>	122 <i>2.0%</i>	113 <i>1.8%</i>	155 <i>2.5%</i>	230 <i>3.8%</i>	725 <i>11.8%</i>	1,792 <i>29.2%</i>	2,390 <i>39.0%</i>	6,133
1929	722 <i>9.1%</i>	291 <i>3.7%</i>	258 <i>3.3%</i>	160 <i>2.0%</i>	349 <i>4.4%</i>	851 <i>10.8%</i>	2,113 <i>26.8%</i>	3,154 <i>39.9%</i>	7,898
1930	512 <i>8.6%</i>	84 <i>1.4%</i>	117 <i>2.0%</i>	156 <i>2.6%</i>	253 <i>4.3%</i>	667 <i>11.2%</i>	1,813 <i>30.6%</i>	2,328 <i>39.3%</i>	5,930
1931	552 <i>8.5%</i>	137 <i>2.1%</i>	154 <i>2.4%</i>	169 <i>2.6%</i>	275 <i>4.2%</i>	701 <i>10.8%</i>	1,902 <i>29.2%</i>	2,616 <i>40.2%</i>	6,506
1932	617 <i>9.5%</i>	109 <i>1.7%</i>	144 <i>2.2%</i>	155 <i>2.4%</i>	246 <i>3.8%</i>	659 <i>10.2%</i>	1,791 <i>27.7%</i>	2,748 <i>42.5%</i>	6,469

Comparative Statistics of the larger English Cities, 1932.

	RATE PER 1,000 POPULATION.					DEATH RATE PER 1,000 BIRTHS.	
	Population.	Birth Rate.	Death Rate.	Phthisis. Death Rate.	Other Tuberculosis. Rate.	Deaths under One Year.	Diarrhoea and Enteritis under 2.
London ..	4,357,800	14·3	12·3	0·82	0·12	67	12·55
Birmingham ..	1,017,500	16·3	11·3	0·83	0·10	67	7·7
Liverpool ..	861,935	21·0	13·2	1·12	0·20	91	14·6
Manchester ..	768,745	15·4	13·0	1·00	0·17	85	9·6
Sheffield ..	513,000	14·4	11·6	0·69	0·13	73	5·0
Leeds	484,900	14·4	13·3	0·80	0·22	88	15·1
Bristol	403,900	15·0	11·5	0·73	0·10	51	5·6
Hull	318,200	18·9	11·8	0·8	1·0	68	10·3
Bradford ..	296,300	13·6	13·9	0·75	0·18	75	6·2
West Ham ..	289,300	17·2	11·4	0·96	0·17	71	11·8
Newcastle ..	285,100	17·1	12·4	0·98	0·22	76	9·0
Stoke-on-Trent	276,500	17·1	12·1	0·84	0·17	88	16·4
Nottingham ..	270,700	16·4	12·5	0·79	0·18	80	9·0

Cremation.—Out of a total of 6,469 deaths which occurred in the city during 1932, the number of bodies disposed of by cremation was 55, or 0·85 per cent., as compared with 54, or 0·83 per cent., for the previous year.

During the year the Crematorium at Lawnswood was partially reconstructed and modernised. There were also added a Columbarium and a Garden of Rest. The result has been to eliminate certain features which made the old building rather depressing, not to say ugly, and to make the whole place brighter and much more attractive. The Board are to be congratulated on the results of their efforts in this respect.

The rate of progress of cremation in the city considering its obvious advantages is extremely and disappointingly slow. I had hoped that long ere now the obvious advantages of cremation over the older method of earth burial would have been generally recognised and that it would have superseded the latter. Unfortunately that is not the case and as I remarked in a previous report we shall have to look to the coming generation to lead the way.

CREMATIONS IN LEEDS, 1905-1932.

Year.				No. of Leeds people cremated.	Nett total deaths in City.	Percentage of cremations on nett deaths (Leeds people cremated).
1905	..	..	..	7	7,047	0·10
1906	..	..	..	10	7,350	0·14
1907	..	..	..	12	7,167	0·17
1908	..	..	..	16	7,430	0·22
1909	..	..	..	9	6,806	0·13
1910	..	..	..	5	6,711	0·07
1911	..	..	..	7	7,331	0·10
1912	..	..	..	14	6,396	0·22
1913	..	..	..	7	7,237	0·10
1914	..	..	..	18	6,885	0·26
1915	..	..	..	13	7,609	0·17
1916	..	..	..	9	6,946	0·13
1917	..	..	..	10	7,052	0·14
1918	..	..	..	23	8,529	0·27
1919	..	..	..	18	6,992	0·26
1920	..	..	..	13	6,591	0·20
1921	..	..	..	9	6,285	0·14
1922	..	..	..	17	6,479	0·26
1923	..	..	..	11	5,986	0·18
1924	..	..	..	24	6,747	0·36
1925	..	..	..	26	6,037	0·43
1926	..	..	..	14	6,062	0·23
1927	..	..	..	32	6,198	0·52
1928	..	..	..	31	6,133	0·51
1929	..	..	..	36	7,898	0·46
1930	..	..	..	26	5,930	0·44
1931	..	..	..	54	6,506	0·83
1932	..	..	..	55	6,469	0·85
Total	..	..	..	526	190,809	0·28

Infectious and Other Diseases.

INFECTIOUS AND OTHER DISEASES

BY

E. ASHWORTH UNDERWOOD, M.A., B.Sc., M.B., D.P.H.,
Chief Assistant Medical Officer of Health.

During the year 1932 there were few peaks on the epidemic curves of most of the common diseases. A notable exception to this statement occurred towards the end of the year, when influenza became epidemic in the city.

No case of smallpox was notified during the year. Scarlet fever was of a mild type and the number of cases notified were comparatively few. There was also a decrease in the number of notified cases of measles, puerperal fever, puerperal pyrexia and of pneumonia.

Reference was made in the Report for 1931 to the presence in the city of a severe form of diphtheria. During the year 1932 there was only a slight decrease in the number of notified cases of this disease, but the case mortality rate showed a very satisfactory reduction.

There was an appreciable increase in the number of deaths from enteritis in children under two years of age. It is shown in the report that this increase was due to a rise in the number of deaths from a condition which was apparently true summer diarrhoea, and which prevailed mainly during the months of September and October.

Although serious outbreaks of enteric fever occurred in other districts of the West Riding of Yorkshire the disease showed no appreciable increase in Leeds.

The outbreak of influenza, which commenced during the first week of December, continued until the end of February, 1933. The disease was very prevalent but the clinical type was mild. This outbreak is dealt with in a later paragraph.

A complete summary of all cases of notifiable infectious diseases notified to the Department during 1932 will be found in the Appendix (Table II.).

Smallpox.—No case of this disease was reported in the city during 1932. The last year in which no smallpox cases were reported in Leeds was 1925. This low incidence in the city during the year

under review corresponded to a low incidence for the country as a whole. The number of cases of smallpox which were notified in England and Wales during 1932 (from the Quarterly Returns of the Registrar General) was 2,070. During the two preceding years the number of notified cases were :—1931, 5,665 cases, 1930, 11,839 cases. Since the peak years of 1927 and 1928 variola minor in England and Wales has shown a decreasing fatality rate and a decline in incidence which has been much accelerated during the last two years. The following figures give the incidence of smallpox cases in Leeds since 1922 and indicate clearly the rise in incidence of cases of variola minor to the peak in 1927 and the subsequent rapid decline :—

Year.	1922	1923	1924	1925	1926	1927	1928	1929	1930	1931	1932
Cases notified ..	1	—	7	—	5	59	53	24	42	5	—

Cases referred for Second Opinion.—During the year under review 16 cases were referred as “doubtful smallpox” by general medical practitioners, as compared with 24 during the preceding year. The cases included chickenpox 13; dermatitis 1; other conditions 2.

Two of these cases were admitted to Seacroft Hospital for further observation before the final diagnosis was established. In one of these cases this measure was considered to be desirable since the patient was the deputy keeper of a common lodging house.

Observation of Contacts.—During the year 25 Leeds persons, who had been in contact with cases of smallpox whilst visiting other towns or whilst returning to this country from abroad, were kept under observation until the end of the quarantine period of 21 days.

Vaccination.—During 1931 the last year for which statistics are available 7,555 births were registered of whom 3,963 or 52 per cent. were successfully vaccinated; 49 cases were found to be insusceptible to vaccination and 2,511 statutory exemptions were issued on account of conscientious objections by parents or guardians.

The following table illustrates the number of children vaccinated from year to year. The year 1927 was exceptional owing to the increased prevalence of smallpox in the city which gave vaccination a temporary fillip.

VACCINATION.

Year.	Number of children born.	Number of successful primary vaccinations during year.	Number granted exemption certificates during year.
1925	8,576	5,919	2,477
1926	8,515	6,045	2,348
1927	8,129	6,590	2,016
1928	7,978	5,828	2,387
1929	7,727	4,127	2,423
1930	7,902	4,275	2,558
1931	*7,555	3,963	2,511

*Quite an appreciable number of these children may be vaccinated in 1932

Although there was a slight drop in the number of primary vaccinations this figure represents 52·4 per cent. of the total births for the year. These results compare favourably with those of other large cities.

Chickenpox.—The notification of this disease was discontinued in the city on 31st December, 1931. No official figures for the year under review are therefore available.

Diphtheria.—The number of cases notified during the year was 889 as compared with 995 notified during the year 1931. The deaths numbered 48 which is equivalent to a death-rate of 0·10. In previous reports mention was made of the discovery of two types of the diphtheria bacillus in Leeds, and this subject has received considerable attention in medical literature.

There is no doubt that the high death-rate from diphtheria in the city during the year 1931 was due, very largely, to the frequency of infections with *B. diphtheria gravis*. That the number of fatalities in cases was not unduly high is, however, brought out by the following table which shows the case mortality rates for diphtheria during the last twelve years.

Year.	1921	1922	1923	1924	1925	1926	1927	1928	1929	1930	1931	1932
Case Mortality Rate ..	5·71	5·96	5·43	9·34	9·24	6·95	6·38	3·31	4·85	5·43	8·64	5·39

DIPHTHERIA AND MEMBRANOUS CROUP.

Year.	Cases notified.	Case-rate.	Deaths.	Death-rate. LEEDS.	Death-rate England and Wales.
1921	665	1·43	38	0·08	0·13
1922	470	1·01	28	0·06	0·11
1923	368	0·78	20	0·04	0·07
1924	289	0·61	27	0·06	0·06
1925	422	0·89	39	0·08	0·07
1926	374	0·79	26	0·05	0·08
1927	439	0·92	28	0·06	0·07
1928	634	1·34	21	0·04	0·08
1929	536	1·12	26	0·05	0·09
1930	994	2·08	54	0·11	0·09
1931	995	2·05	86	0·18	0·07
1932	889	1·83	48	0·10	0·06

Although the cases notified during 1932 were only slightly less than those notified during the year 1931, there was a considerable drop in the number of deaths, namely from 86 to 48. The case mortality rates for 1931 and 1932 were 8·64 and 5·39 respectively. In view of the severity of the type last year this decrease in the case mortality rate may be regarded with some satisfaction.

Diphtheria Immunization.— The campaign for the active immunization of all children against diphtheria was very actively pressed during the year by the issue of leaflets to the general public.

During the year material sufficient to immunize 495 children was supplied to general medical practitioners. Sessions were held weekly at certain infant welfare clinics and 737 children were protected against the disease.

In addition, with the co-operation of the School Medical Department 591 children were immunized at certain of the School Clinics.

In all 1,874 children were immunized against diphtheria during the year.

With regard to immunization of children under 5 years of age Dr. Gladys Russell, Assistant Medical Officer of Health for Maternity and Child Welfare, in whose department this work has been done, reports as follows :—

“ There was a slight increase in the number applying for immunization during the year. Treatment was given principally at the Central Clinic, but also at Armley and Bramley Welcomes. Altogether 737 children were immunized, including 63 under one year, 119 between 1-2 years, 308 between 2-5 years, and 247 over 5 years. Children over 7 years numbering 176 were schick tested before treatment of which 128 were positive and received treatment.”

“ All cases that have undergone a complete course of treatment are submitted to a schick test before they are declared immune. A total of 549 had this final schick test with negative results in 411 and positive in 138, or 25.1 per cent. Of those giving a positive reaction, 117 received further treatment and the remainder defaulted. Certain of the Maternity and Child Welfare Medical Officers assisted with the immunization of school children at the School Clinics. A total of 591 school children were immunized by these officers.”

Diphtheria Outbreaks.—I. The control of diphtheria in large institutions continues to raise problems which are difficult to solve. During the year 124 cases of diphtheria were notified from five institutions. Some idea of the peculiar difficulties involved may be obtained from the discussion of the cases, 57 in number, notified from one institution. These cases occurred at all seasons of the year, but the incidence was highest during the months of February and November when 10 and 11 cases were notified respectively. Of these 57 cases, 2 were maids, and no fewer than 13 were members of the nursing staff. The remaining 42 cases were patients, 37 of whom had evidently contracted the disease after admission. It is somewhat significant that these cases all occurred in three wards. The assertion is sometimes made that in such instances the infection

is direct from patient to patient. But in this case there is considerable evidence that the nursing staff played an important role in transmitting the virus and in keeping it alive for a time. This is what might be expected on *a priori* grounds, since the nursing staff are probably more in contact with all children than individual children are with each other. On at least two occasions the primary case, which infected several other children, had just been transferred from another hospital. Before transfer a nasal swab had been taken with a negative result. These instances further emphasize the important point that, where there is a possibility of transmitting the diphtheria bacillus, a single negative swab should never be relied upon as evidence. In this particular institution control of the disease was very difficult owing to the fact that reliance was at first placed almost entirely upon routine swabbing and removal of infected cases. It was not until later in the year that a prophylactic dose of serum was permitted to be given to contacts, and when this measure was adopted the outbreak, which had already given rise to 10 cases in one ward, ceased. Within a month it broke out in another ward. Schick testing of patients was not performed and it was not until late in the year that immunization of the nurses was carried out.

2. During the summer of 1932 a small outbreak of diphtheria occurred in a residential home for children. Five cases were notified in a week. The writer visited and suggested that a prophylactic dose of serum should be given to contacts, and that active immunization should be commenced. Two other children who gave positive swabs were removed. As a result, probably of the prophylactic dose of serum, no further cases occurred, but active immunization was not carried out. Three months later two other cases were notified. Prophylactic injections of serum were again given, but after two months the outbreak recommenced and nine cases were notified. Active immunization was again strongly advised. This procedure was adopted and by March, 1933, most of the children had been immunized. At the time of writing no further cases have occurred.

3. A case of diphtheria was reported in which the patient had developed his infection whilst staying in a children's holiday camp outside the city. He had been in contact with 58 other Leeds children and in every case the parents were visited and warned to consult a doctor if any suspicious symptoms occurred. They were

also advised to have their children immunized. In 13 cases the parents consented to have their children protected against the disease and they were duly immunized at our Central Infant Welfare Clinic. Fortunately no further case developed.

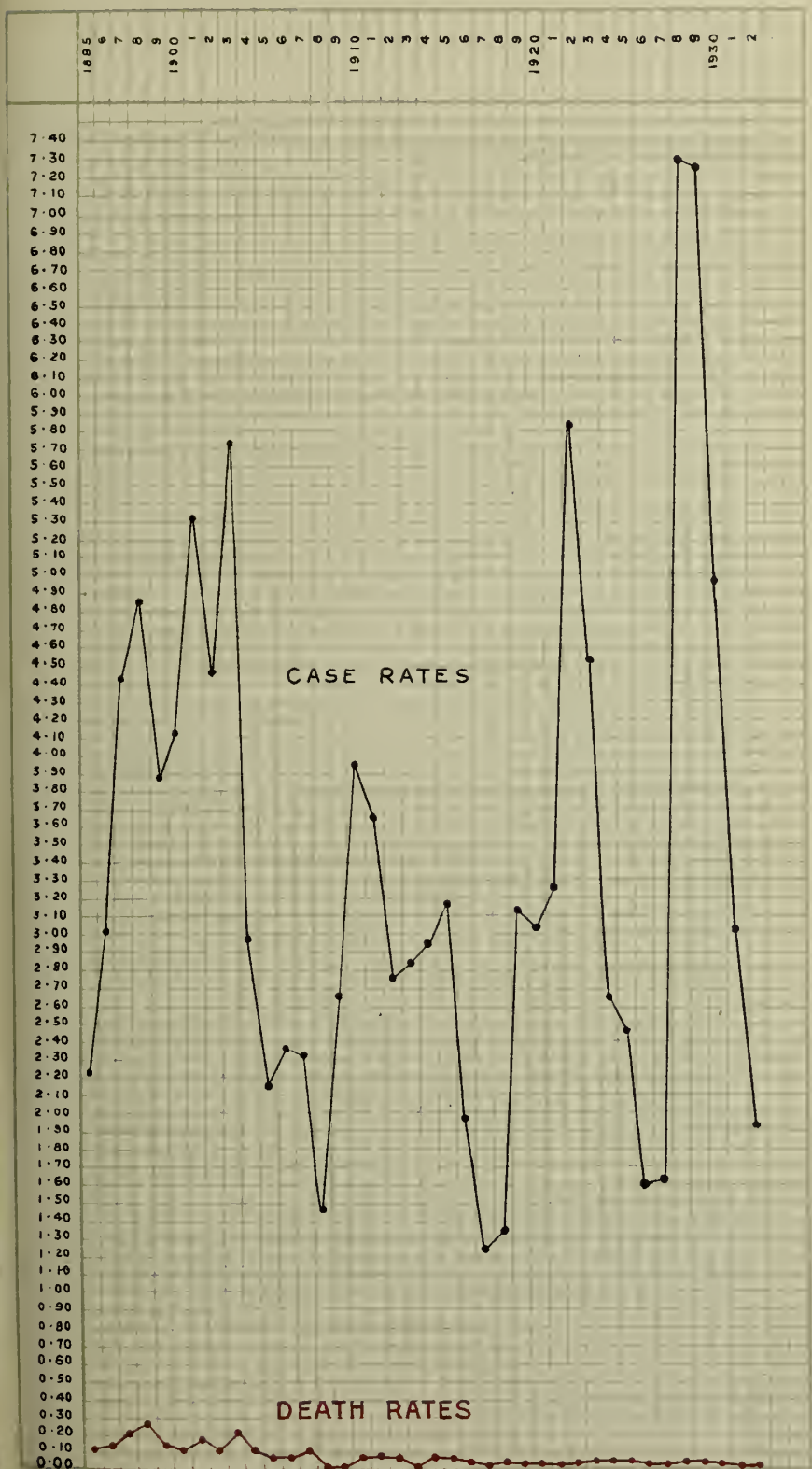
SCARLET FEVER.

Year.	Cases notified.	Case-rate.	Deaths.	Death-rate. LEEDS.	Death-rate England and Wales.
1922	2,722	5.83	33	0.07	0.04
1923	2,134	4.54	31	0.07	0.03
1924	1,256	2.66	20	0.04	0.02
1925	1,166	2.47	15	0.03	0.03
1926	756	1.60	5	0.01	0.02
1927	773	1.62	6	0.01	0.01
1928	3,515	7.40	18	0.04	0.01
1929	3,473	7.26	29	0.06	0.02
1930	2,383	4.98	23	0.05	0.02
1931	1,467	3.02	12	0.02	0.01
1932	931	1.92	8	0.02	0.01

Scarlet Fever.—The year 1932 was an inter-epidemic year for scarlet fever and only 931 cases were notified. The accompanying table and the graph show that this incidence was the lowest since the inter-epidemic years 1926 and 1927. During 1932 there was no marked change in the type of the disease which continued to be mild. The number of cases who died was 8, which is equivalent to a mortality rate of 0.02 and a case mortality of 0.86 per cent.

Outbreaks in Institutions.—During the year 70 cases of scarlet fever were notified and removed from five institutions. In the smaller institutions control did not present a great deal of difficulty and the smaller outbreaks soon terminated. In the large general

SCARLET FEVER CASE AND DEATH RATES 1895 - 1932



institutions the continuance of infection throughout the greater part of the year gave rise to much anxiety. In two at least, of these outbreaks the nursing staff appeared to play an important part in the spread of the infection. Out of a total of 58 cases removed from the two institutions concerned 11 were nurses. Further, in 8 other instances haemolytic streptococci were found in the throats of nurses. The recognition of the fact that the group of haemolytic streptococci can produce a symptom complex of which scarlet fever is only one manifestation, makes such outbreaks more difficult to control than similar outbreaks of diphtheria. The recognition of the presence of the diphtheria bacillus is a simple bacteriological procedure, but the identification of haemolytic streptococci is a more difficult process, and it is questionable whether such measures are worth the trouble when carried out on a large scale. Apart from the presence of scarlet fever, recent happenings in other parts of the country have shown that the haemolytic streptococcus can give rise to formidable outbreaks of sore throat, which in certain cases may lead to grave complications or even to a fatal issue.

It seems to the writer that in large institutions which have a rapid turn-over of patients, all cases of sore throat should be isolated until they can be shown to be due to pyogenic or other organisms which are not related to the haemolytic streptococcus or the diphtheria bacillus. Transient sore throats amongst members of the staff might be a fruitful source of infection, and nurses should be warned repeatedly to report all such conditions at once. In outbreaks of this kind it is doubtful if the application of the Dick test is of any practical value. It should be mentioned that some of the 70 cases noted at the beginning of this section were definitely cases of "surgical" scarlet fever following upon burns or operations.

Return Cases.—Cases occurring in the same house within a period of 28 days from the discharge of a case from hospital are regarded as "return" cases. Of the 920 cases discharged from Seacroft Hospital during the year 32 were infected in this way. This is equivalent to a return rate of 3.5 per cent. Three of these cases were re-admitted to hospital.

Measles.—In previous reports cases of measles and German measles have not been differentiated for statistical purposes and were included together in the same table. In view of the fact that in the year 1929, out of 10,742 cases which were included in the

table as measles, 1,256 were actually German measles, it seems desirable to place these diseases in separate categories. The tables given hereunder show the actual incidence and deaths of these individual diseases.

MEASLES (EXCLUDING GERMAN MEASLES).

Year.	Cases notified.	Case-rate.	Deaths.	Death-rate LEEDS.	Death-rate England and Wales.
1921	209	0.45	5	0.01	0.06
1922	9,932	21.28	152	0.33	0.15
1923	4,683	9.97	50	0.11	0.14
1924	6,654	14.11	46	0.10	0.12
1925	5,100	10.78	39	0.08	0.14
1926	7,076	14.95	19	0.04	0.09
1927	8,569	17.94	117	0.24	0.09
1928	3,638	7.66	21	0.04	0.11
1929	9,486	19.82	102	0.21	0.09
1930	913	1.91	2	0.00	0.11
1931	10,955	22.52	56	0.12	0.08
1932	3,540	7.30	52	0.11	0.08

GERMAN MEASLES.

Year.	Cases notified.	Case-rate.	Deaths LEEDS.	Deaths in England and Wales.
1921 ..	31	0.07	..	15
1922 ..	146	0.31	..	15
1923 ..	541	1.15	..	17
1924 ..	383	0.81	..	12
1925 ..	201	0.43	..	42
1926 ..	626	1.32	1	35
1927 ..	95	0.20	..	20
1928 ..	41	0.09	..	12
1929 ..	1,256	2.62	..	31
1930 ..	343	0.72	..	27
1931 ..	101	0.21	..	16
1932 ..	86	0.18	..	

Since measles epidemics follow each other at intervals of about 92 weeks it might have been expected that the incidence and case mortality rate would have been low during the year 1932. On the contrary a "trailer" appeared which was sufficiently notable to deserve some comment. The epidemic of 1931, the largest which has been known in the city since the disease became notifiable, came to an end during October. The outbreak in 1932 started in February and continued until July when it declined rapidly. Although the total number of cases was comparatively small (3,540) as compared with those of the previous year (10,955), it is significant that the deaths were almost as numerous, and the death-rate of 0.11 was practically identical with the death-rate in the large epidemic of 1931. Another notable point is that of the 52 deaths, 17 (33 per cent. of total deaths) were under one year of age, as compared with 6 deaths (11 per cent.) in the large epidemic of 1931. This increased fatality of measles in children under one year of age, and the continued high fatality in children from one to two years contributed to make this small epidemic of 1932 a notable addition to the causes of death during the year.

German Measles.—Despite the fact that over 3,000 cases of measles occurred in the city during 1932, the number of cases of German measles which were notified was the second lowest since 1921, the association presents no unusual features and there were no deaths.

Whooping Cough.—As this disease is not notifiable in Leeds, the actual number of cases cannot be ascertained. The number of deaths, however, showed no remarkable feature, the death-rate being only slightly greater than that for England and Wales as a whole, and considerably below the average (0.14) for the previous 11 years. The large percentage (76 per cent.) of deaths in children under two years of age continues to be a disquieting feature.

Erysipelas.—It is pleasing to report another decrease in the number of cases reported during the year, 289 as compared with 317 notified during the year 1931. Of these, 141 were removed to hospital. There were 22 deaths equal to a mortality rate of 0.05.

Encephalitis Lethargica.—Three deaths of this disease were notified during the year. The deaths numbered 10, equivalent to a death-rate of 0.02.

WHOOPING COUGH.

Year.	Deaths.	Death-rate. LEEDS.	Death-rate England and Wales.
1922	115	0.25	0.17
1923	32	0.07	0.11
1924	87	0.18	0.10
1925	47	0.10	0.16
1926	119	0.25	0.11
1927	44	0.09	0.09
1928	36	0.08	0.08
1929	107	0.22	0.16
1930	32	0.07	0.05
1931	43	0.09	0.06
1932	41	0.08	0.07

AGES AT DEATH FROM WHOOPING COUGH.

1932	0-1	1-2	2-3	3-4	4-5	5-10	10-15	Total.
No. of deaths	18	13	7	2	1	..	..	41

ERYSIPELAS.

Year.	Cases notified.	Case-rate.	Deaths.	Death-rate. Leeds.	Death-rate England and Wales.
1922	228	0.49	11	0.02	0.02
1923	205	0.44	17	0.04	0.02
1924	237	0.50	10	0.02	0.02
1925	321	0.68	13	0.03	0.02
1926	327	0.69	12	0.03	0.02
1927	320	0.67	18	0.04	0.02
1928	361	0.76	19	0.04	0.02
1929	349	0.73	19	0.04	0.03
1930	423	0.88	23	0.05	0.03
1931	317	0.65	22	0.05	0.03
1932	289	0.60	22	0.05	

Malaria and Dysentery.—No cases of malaria or dysentery were notified during the year. There was one death from malaria but none from dysentery. In discussing the latter disease, however, it should be mentioned that two instances of infection with the Flexner Y bacillus came to the notice of the writer. Three members of a household—father, mother, and son aged 3 years complained of sickness and diarrhoea in February. The condition apparently commenced during the previous July when the family were on holiday. In August the mother had an attack of acute diarrhoea and flatulence, and soon after the father and son developed a similar condition. During the next six months these symptoms manifested themselves at intervals, and on one occasion it was noticed that the child's stools contained blood. At the time of the complaint the two adults were definitely of opinion that the tap water was responsible. A full investigation was carried out and it was found that the blood of both adults agglutinated the Flexner Y bacillus. The stools were negative. Examination of the tap

water and of the water pipes showed no evidence of contamination. As a result of the investigation it seemed probable that the infection has been contracted during the previous summer while the family was on holiday.

A further note on the occurrence of dysentery will be found in the section on Food Poisoning on page 72.

Acute Anterior Poliomyelitis.—During the year 1932 six cases of this disease were notified and of these three proved fatal. All the cases occurred in different parts of the city and no common factor was discovered. Each case was investigated by a member of the staff.

Cerebro Spinal Meningitis.—There was a slight increase in the number of notified cases of this disease during the year; namely 21 as compared with 16 cases for the year 1931. Of these 21 cases 19 proved fatal. This gives a death-rate of 0.04 and a case mortality rate of 90.5 per cent.

During the year the disease continued to be present in epidemic form in small urban areas and in certain towns of the West Riding.

Puerperal Fever and Puerperal Pyrexia.—The figures for the year are given below, viz.:—

Disease.	Cases notified.		Case-rate per 1,000 population		Deaths.		Death-rate per 1,000. population	
	1931	1932	1931	1932	1931	1932	1931	1932
Puerperal Fever ..	65	28	0.13	0.06	17	8	0.03	0.02
Puerperal Pyrexia ..	76	43	0.16	0.09	..	..	..	..

Of the 28 cases of puerperal fever, 15 (53.6 per cent.) occurred in institutions, 6 (21.4 per cent.) in doctors' practices, and 7 (25.0 per cent.) in the practice of midwives. Eight (28.6 per cent.) were removed to Seacroft Hospital.

The cases of puerperal pyrexia were distributed as follows:— 26 (60.5 per cent.) in institutions, 8 (18.6 per cent.) in doctors' practices and 9 (20.9 per cent.) in midwives' practices. As compared with 1931, a decrease of 37 cases of puerperal fever and a decrease of 33 cases of puerperal pyrexia is recorded.

This subject is further dealt with in the section on Maternity and Child Welfare on page 138.

PUERPERAL FEVER.

Year.	Cases.	Case-rate per 1,000 population.	Deaths.	Death-rate per 1,000 births.	Death-rate per 1,000 population.
1900	21	0.05	13	0.99	0.03
1901	26	0.06	16	1.24	0.04
1902	21	0.05	12	0.91	0.03
1903	26	0.06	10	0.77	0.02
1904	26	0.06	11	0.88	0.03
1905	28	0.06	9	0.73	0.02
1906	30	0.07	14	1.16	0.03
1907	30	0.07	15	1.28	0.03
1908	24	0.05	13	1.08	0.03
1909	32	0.07	19	1.73	0.04
1910	29	0.07	14	1.29	0.03
1911	23	0.05	13	1.23	0.03
1912	31	0.07	9	0.87	0.02
1913	32	0.07	13	1.20	0.03
1914	46	0.10	27	2.53	0.06
1915	23	0.05	12	1.21	0.03
1916	28	0.06	12	1.27	0.03
1917	22	0.05	5	0.66	0.01
1918	17	0.04	6	0.81	0.01
1919	26	0.06	6	0.79	0.01
1920	56	0.12	29	2.58	0.06
1921	31	0.07	8	0.79	0.02
1922	35	0.07	14	1.51	0.03
1923	51	0.11	10	1.15	0.02
1924	53	0.11	9	1.05	0.02
1925	52	0.11	24	2.93	0.05
1926	46	0.10	14	1.74	0.03
1927	37	0.08	14	1.80	0.03
1928	47	0.10	14	1.83	0.03
1929	31	0.06	10	1.35	0.02
1930	51	0.11	10	1.32	0.02
1931	65	0.13	17	2.35	0.03
1932	28	0.06	8	1.14	0.02

Ophthalmia Neonatorum.—Forty-six cases of this disease were reported during the year, a decrease of seven cases as compared with the previous year.

DAY OF ONSET FROM BIRTH.

1932.	1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th	10th-15th	15th-20th	20th-25th
No. of Cases	—	1	3	3	6	1	1	3	5	4	13	4	2

The results of treatment were as follows :—

Recovery apparently perfect	..	..	45
Recovery not perfect	..	..	—
Result not known	..	..	I

This subject is further dealt with in the section on Maternity and Child Welfare on page 138.

The Enteric Group.—During the year nine cases of enteric fever were notified. Of these eight were due to infection by *B. Typhosus* and one by *B. paratyphosus B.* The ages of the patients ranged from 14 to 75 years, the average being 34. Of the nine cases, seven were removed to hospital.

The first case during the year, notified on February 20th gave rise to an interesting sequence of events. The patient was a married woman, aged 27 years, with a history of general malaise extending over three weeks. The writer visited on the day of notification, and found that the patient often ate ice-cream, and that a man of 34 years, who lodged in the house, had been removed to a general hospital two days previously. No other member of the household including the patient's grandmother, had had any suspicious symptoms. Specimens of blood, faeces, and urine were obtained from the contacts. Investigation of the family of the ice-cream vendor showed that his wife had been in hospital in 1909 and had been diagnosed as suffering from a doubtful attack of typhoid fever. Specimens were taken for bacteriological examination from all members of this household, but the results proved negative. It was then ascertained that the lodger had been admitted to hospital as a case of pneumonia. In a day or so the condition became clinically indistinguishable from typhoid fever, and the subsequent course was compatible with that disease. Repeated bacteriological

ENTERIC FEVER.

Year.	Cases notified.	Case-rate.	Deaths.	Death-rate. LEEDS.	Death-rate England and Wales.
1922	14	0.03	7	0.01	0.01
1923	9	0.02	1	0.00	0.01
1924	25	0.05	6	0.01	0.01
1925	9	0.02	3	0.01	0.01
1926	9	0.02	1	0.00	0.01
1927	14	0.03	2	0.00	0.01
1928	6	0.01	1	0.00	0.01
1929	14	0.03	3	0.01	0.01
1930	4	0.01	2	0.00	0.01
1931	10	0.02	2	0.00	0.01
1932	9	0.02	..	..	0.01

CASES OF ENTERIC FEVER MONTH BY MONTH.

Jan.	Feb.	March	April	May.	June.	July.	Aug.	Sept.	Oct	Nov.	Dec.
-	2	1	-	-	-	-	-	1	1	4	-

examination, however, failed to give definite evidence of the nature of the infection. Meanwhile, the blood of the patient's grandmother was returned as weakly positive for *B. Typhosus* and this organism was isolated from her stools. She was removed to hospital, where the carrier-condition cleared up under treatment and she was discharged six months later. This woman gave no history of having suffered at any time from an illness which might have been mild typhoid, and the outbreak is interesting in that other and more probable sources proved to be false.

During October and November extensive outbreaks of enteric fever occurred at Malton and Denby Dale in the West Riding. Only

one Leeds case contracted the infection in these areas. This patient was a student at a Training College. She contracted the disease whilst visiting her home in Denby Dale.

In November a boy of 14 years was notified as suffering from typhoid fever. The infection in this case was traced to a male lodger, aged 70 years. This person's blood agglutinated *B. Typhosus* in a dilution of 1 in 1,280 and the organism was isolated from his faeces and urine. After three months' treatment in hospital, the condition cleared, but the organism was subsequently found in his faeces on two occasions. He is still under observation.

In November the Health Committee through the Medical Officer of Health offered the use of 40 beds in Seacroft Fever Hospital for the nursing of typhoid fever cases from Malton. This offer was readily accepted by the Malton District Council, and 40 cases in all were admitted from this area. Twenty-nine of the patients were removed by the ambulance of the Malton authority, the remaining eleven cases being conveyed by the ambulance of the Leeds Health Department.

In the report for 1931 mention was made of a girl of 15 years who became a chronic faecal carrier. During 1932 nine examinations of faeces were made from this patient and four of these were positive.

Influenza.—A severe outbreak of influenza began in the city about the beginning of December. It quickly developed, and the peak of the epidemic was reached during the last two weeks of January, 1933. Thereafter the intensity declined, and by the end of February had practically faded out.

Reference to the table on page 61 shows that the death-rate from influenza in 1932 was 0.24 and that, of the 116 persons who died, 88 were over 45 years.

During the epidemic the total number of deaths between December 1st and February 25th was 224, viz., December 14, January 149 and February (to the 25th) 61. The greatest number of deaths, namely 53, was during the week ending January 28th.

These figures give little indication of the actual prevalence of the infection but a special investigation was carried out on a selected population in the city. This population consisted of members of

INFLUENZA.

Year.	Deaths.	Death-Rate. LEEDS.	Death-Rate England and Wales.
1922	169	0.36	0.56
1923	122	0.26	0.22
1924	404	0.86	0.49
1925	159	0.34	0.33
1926	100	0.21	0.23
1927	173	0.36	0.57
1928	100	0.21	0.20
1929	568	1.19	0.74
1930	59	0.12	0.13
1931	125	0.26	0.36
1932	116	0.24	0.32

AGES AT DEATH FROM INFLUENZA.

1932	0-1	1-2	2-5	5-15	15-25	25-45	45-65	65+	Total.
No. of Deaths	5	..	5	3	2	13	38	50	116

Corporation Departments and of certain large firms in the city, numbering in all 17,195 persons. With the helpful co-operation of the heads of these departments and firms, the writer was enabled to ascertain for each week the actual numbers of persons who were certified by doctors to be suffering from the disease. During the whole outbreak the total number of persons affected in this population was 2,772, which gives an attack rate of 161 per thousand. From the evidence which was collected the peak of the epidemic evidently occurred during the week ending January 14th, though

the mortality curve did not reach its peak until two weeks later, namely January 28th. In the selected population only five deaths took place which gives a death-rate of 0.29 per 1,000.

From information furnished by many medical practitioners, it was evident that the disease was of a comparatively mild type. The onset of the illness was usually sudden, and marked by prostration, general pains and high temperature. After a few days in bed convalescence set in and recovery was usually rapid. Most persons affected appear to have been absent from their work for about ten days. Gastric cases were not at all common. Pneumonia as a complication was happily infrequent, but an appreciable proportion of the cases, both adults and children, developed otitis.

Epidemic (Summer) Diarrhoea and Enteritis.—Under this heading the Registrar General includes all cases of death due to diarrhoea or enteritis occurring in children under two years of age. Formerly the term "summer diarrhoea" was a distinct entity, and was applied to an acute infectious disease which mainly affected young children, which spread from case to case in a household, and which had a distinct relation to fly prevalence. Under this heading, in the death returns, it is recognised that many cases are now included which are not diarrhoea of the acute summer variety. Nevertheless, statements are frequently made regarding the prevalence of "summer diarrhoea," which are obviously based upon the number of deaths from diarrhoea due to many causes.

The table of deaths from these conditions shows that during 1932 there was a marked increase in Leeds, and that the death-rate per 1,000 births was more than double that for England and Wales. In an attempt to assess the true value of this increase the death certificates for all cases under two years of age dying as a result of diarrhoea and enteritis during the last five years were analysed and the results are given in the following table.

It will be seen that in any one year from 33 to 52 per cent. of the cases which came under this heading showed enteritis as a terminal complication of some other primary condition. Of these primary conditions convulsions and marasmus were the most common. In certain years broncho-pneumonia caused a considerable number of deaths accompanied by enteritis. Prematurity or debility from birth seem to cause constantly an appreciable number of such deaths every year.

DEATHS FROM DIARRHŒA AND ENTERITIS UNDER TWO YEARS AND METEOROLOGICAL CONDITIONS
IN EACH MONTH OF THE YEAR.

1932.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Year.
Deaths	11	9	11	3	3	4	4	9	18	17	8	9	106
Barom. (inches) ..	30.00	30.41	29.81	29.66	29.75	29.96	29.79	30.00	29.83	29.52	30.01	29.96	29.89
Attached Ther. °F. ..	55.36	51.96	52.50	55.92	58.94	63.52	66.67	68.74	63.37	58.60	54.52	52.60	58.67
Dry Bulb	45.96	42.65	44.31	47.69	53.19	62.00	64.13	65.63	57.50	50.92	47.60	45.94	52.51
Wet Bulb	43.69	40.65	41.55	44.71	49.54	56.18	59.31	61.06	54.31	48.00	45.15	43.56	49.14
Humidity	83.31	84.62	79.86	79.65	77.37	69.15	73.90	75.71	80.21	80.83	82.82	82.83	79.01
Mn. of highest reading ..	50.00	46.18	48.91	51.25	57.43	68.34	68.89	71.89	63.86	55.39	51.54	49.43	57.18
„ lowest „ ..	38.21	34.61	35.06	36.00	41.93	48.66	54.00	54.97	47.18	42.21	38.97	38.93	42.70
„ daily range ..	11.79	11.57	13.86	15.25	15.50	19.68	14.89	16.91	16.68	13.18	12.57	10.50	14.47
Total rainfall (inches) ..	1.50	0.31	1.62	2.70	3.13	0.29	3.39	1.75	1.54	2.95	1.86	0.79	21.83
Sunshine (hours) ..	32.67	49.25	72.25	99.75	95.50	140.17	115.33	131.67	120.33	72.33	31.25	32.42	992.92

The meteorological data are compiled from returns sent us by Mr. Ricketts, the Curator of the Museum.

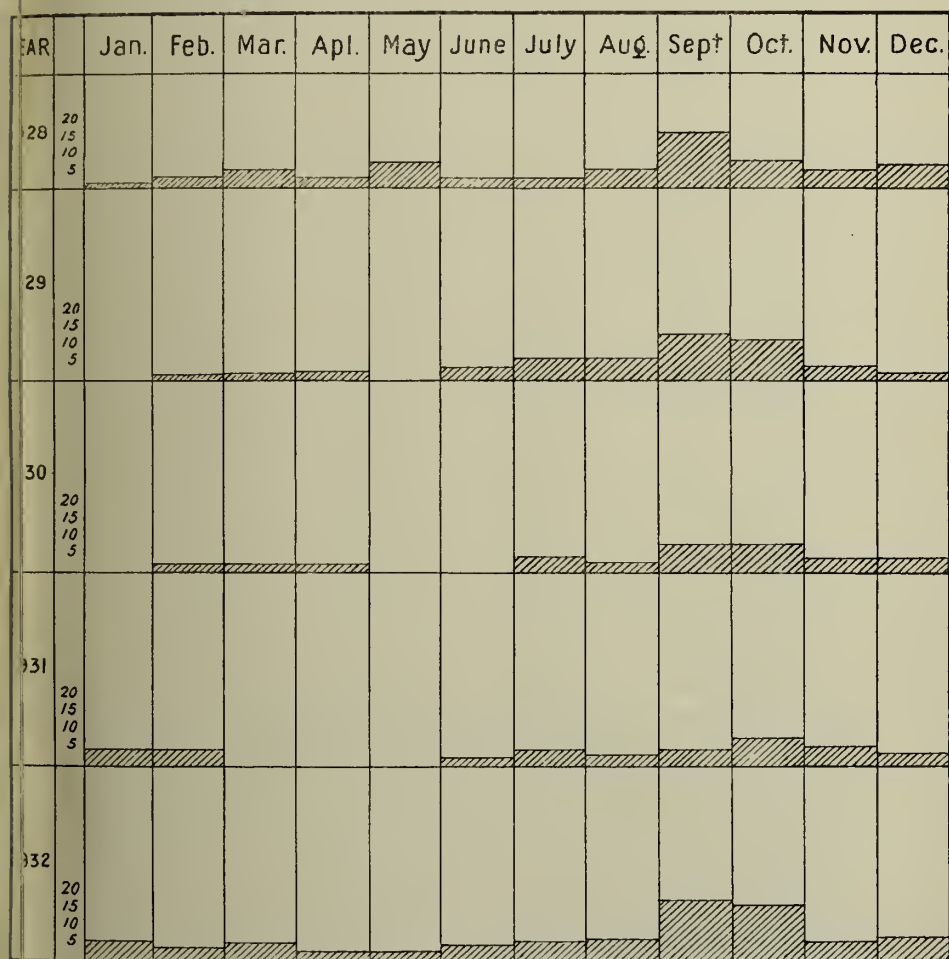
They are uncorrected readings, made at 10 a.m. and 4 p.m.

DEATHS FROM DIARRHŒA AND ENTERITIS.

	1928	1929	1930	1931	1932	Total.
Enteritis	61	42	23	33	61	220
Broncho-pneumonia and Enteritis	5	6	..	5	10	26
Bronchitis and Enteritis ..	2	4	1	3	2	12
Marasmus and Enteritis ..	15	10	2	5	8	40
Convulsions and Enteritis ..	12	12	6	8	11	49
Enteritis, Prematurity or debility from birth	3	2	2	6	6	19
Skin Conditions and Enteritis	3	2	..	4	3	12
Rickets and Enteritis ..	..	..	..	..	1	1
Pyelitis and Enteritis ..	1	6	..	2	2	11
Other Conditions and Enteritis	3	2	..	2	2	9
TOTAL	105	86	34	68	106	399
Percentage of total cases which were true Enteritis ..	58.1	48.8	67.6	48.5	57.5	

The accompanying chart shows the monthly incidence of the cases of primary enteritis during the last five years. From this it is evident that, although the seasonal factor is still effective its influence being seen mainly in the months of September and October, this influence is by no means marked. Probably as a result of more efficient sanitation, and the replacement of the horse by the internal combustion engine, the total deaths per year for a city of almost half a million inhabitants is almost inappreciable.

MONTHLY INCIDENCE OF PRIMARY ENTERITIS DURING THE FIVE YEARS 1928—1932



DIARRHŒA AND ENTERITIS DEATHS UNDER TWO YEARS
WITH RATES PER 1,000 BIRTHS.

Year.	Deaths.	Rate per 1,000 Births.	
		Leeds.	England and Wales.
1922	92	9·9	6·6
1923	118	13·6	8·1
1924	103	12·0	7·6
1925	149	18·2	8·8
1926	147	18·2	9·2
1927	88	11·3	6·7
1928	105	13·7	7·2
1929	86	11·6	8·3
1930	34	4·5	6·2
1931	68	9·4	5·9
1932	106	15·1	6·6

Pneumonia.—The Ministry of Health Regulations of 1919 made two forms of pneumonia subject to notification, viz., acute primary pneumonia and acute influenzal pneumonia. In many areas, however, the incidence of pneumonia is so high that it would seem that practitioners are notifying certain cases of pneumonia which are really secondary to other conditions, such as measles and whooping cough in childhood, and malignant disease in old age. In Leeds every effort has been made to ensure that only those cases of pneumonia are notified which come strictly within the categories defined by the Ministry of Health.

During the year under review 857 notifications of pneumonia were received, of which 748 were primary and 109 influenzal. Most of these cases occurred in the first quarter of the year. The attack rate for the two varieties of pneumonia, based on the notifications

received was 1.54 and 0.22 respectively, as compared with 1.71 and 0.30 for the previous year, and 1.99 and 0.42, the average for the previous five years.

PNEUMONIA (ALL FORMS).

Year.	Deaths.	Death-Rate. LEEDS.	Death-Rate England and Wales.
1922	502	1.08	1.07
1923	440	0.94	0.87
1924	619	1.31	1.00
1925	503	1.06	0.95
1926	484	1.02	0.83
1927	477	1.00	0.95
1928	485	1.02	0.79
1929	825	1.72	1.11
1930	413	0.86	0.70
1931	500	1.03	0.84
1932	497	1.02	

AGES AT DEATH FROM PNEUMONIA.

1932	0-1	1-2	2-5	5-15	15-25	25-45	45-65	65+	Total.
No. of Deaths	106	28	33	22	21	56	124	107	497

The number of deaths which occurred from all forms of pneumonia during the year was 497. This represents a death-rate of 1.02 which was practically identical with that for 1931. As is to be expected in a large industrial area, this death-rate is much higher than that for England and Wales as a whole. The distribution of the deaths in age groups is given on this page, and it will be noted that 167 or 34 per cent. were under five years of age and 231 or

46 per cent. were over 45 years of age. An encouraging feature was a definite decrease in the number of deaths between the ages of one and two years, viz., from 46 in 1931 to 28 in 1932.

Influenza and its pneumonic complications are dealt with in the section on page 60.

BRONCHITIS.

Year.	Deaths.	Death-Rate. LEEDS.	Death-Rate England and Wales.
1922	596	1.28	1.07
1923	518	1.10	0.85
1924	643	1.36	0.97
1925	513	1.08	0.91
1926	439	0.93	0.77
1927	351	0.73	0.84
1928	343	0.72	0.59
1929	559	1.17	0.84
1930	278	0.58	0.49
1931	355	0.73	0.63
1932	299	0.62	

AGES AT DEATH FROM BRONCHITIS.

1932	0-1	1-2	2-5	5-15	15-25	25-45	45-65	65+	Total.
No. of Deaths	23	5	2	1	1	12	71	184	299

Bronchitis.—The year 1932 was marked by a fall in the death-rate from bronchitis in the city. The number of deaths recorded was 299. It was the second lowest on record. The age group

65 and over contributed 62 per cent. of the deaths. The usual close association between the numbers of deaths from pneumonia and bronchitis respectively was not so marked during the year 1932. Although the number of pneumonia deaths during the two years, 1931 and 1932 was practically identical, there was an appreciable drop in the deaths from bronchitis during the year 1932.

CANCER.

Year.	Deaths.	Death-Rate. LEEDS.	Death-Rate England and Wales.
1922	595	1.27	1.23
1923	574	1.22	1.27
1924	639	1.35	1.30
1925	606	1.28	1.34
1926	657	1.39	1.36
1927	649	1.36	1.38
1928	698	1.47	1.43
1929	684	1.43	1.44
1930	728	1.52	1.45
1931	740	1.52	1.48
1932	760	1.57	1.51

AGES AT DEATH FROM CANCER.

1932.	0-1	1-2	2-5	5-15	15-25	25-45	45-65	65+	Total.
Males	2	..	28	160	177	367
Females	44	185	164	393
Total	2	..	72	345	341	760

Cancer.—It is disappointing to be obliged to report a further increase in the death-rate from this disease during the year; 760 deaths were registered as due to cancer as compared with 740 in 1931. Of these 760 cases, 367 were males and 393 were females. This represents an increase of 13 males and 7 females over the figures for 1931. In the group of male cases there was an increase of 37 deaths in the age group 65 and over. Apart, however, from the strictly numerical aspect this increase was more than compensated for by a decrease of 15 cases in the age group 45 to 65, a period of life when men may be said to be at the peak of their usefulness to society. The most notable feature of the group of female deaths was an increase of 16 cases in the age group 25 to 45. This increase is rather disquieting.

During the year there has been co-operation between the Yorkshire Branch of the British Empire Cancer Campaign and the Health Department, and literature has been distributed from the Health Offices regarding the early treatment of cancer.

CANCER DEATH-RATES, ELEVEN LARGE TOWNS, ALSO ENGLAND AND WALES.

	Year 1921.	Year 1922.	Year 1923.	Year 1924.	Year 1925.	Year 1926.	Year 1927.	Year 1928.	Year 1929.	Year 1930.	Year 1931.
London ..	1·33	1·33	1·39	1·42	1·44	1·46	1·49	1·52	1·55	1·57	1·64
Birmingham..	1·10	1·16	1·18	1·31	1·29	1·31	1·39	1·37	1·37	1·42	1·45
Liverpool ..	1·10	1·06	1·13	1·13	1·21	1·18	1·16	1·33	1·34	1·27	1·34
Manchester ..	1·28	1·29	1·41	1·40	1·40	1·49	1·45	1·49	1·56	1·52	1·63
Sheffield ..	1·17	1·18	1·19	1·26	1·33	1·19	1·39	1·37	1·42	1·45	1·44
Leeds ..	1·19	1·29	1·24	1·37	1·28	1·41	1·37	1·46	1·44	1·52	1·53
Bristol ..	1·26	1·21	1·32	1·28	1·32	1·26	1·43	1·45	1·39	1·50	1·49
Hull ..	1·21	1·21	1·04	1·29	1·20	1·46	1·45	1·47	1·40	1·36	1·28
Bradford ..	1·39	1·49	1·33	1·56	1·42	1·63	1·59	1·55	1·58	1·61	1·68
Newcastle ..	1·10	1·08	1·16	1·24	1·32	1·19	1·20	1·54	1·38	1·39	1·30
Nottingham ..	1·43	1·23	1·46	1·40	1·25	1·38	1·49	1·44	1·52	1·43	1·51
England and Wales ..	1·22	1·23	1·27	1·30	1·34	1·36	1·38	1·42	1·44	1·45	1·48

The rates are calculated from figures given in the Registrar General's Annual Reports.

CANCER DEATH RATE. — 1891 - 1932.



Ward.	Buccal cavity and pharynx.		Digestive organs and peritoneum.		Respiratory organs.		Uterus.		Female genital organs.		Breast.		Male genito-urinary organs.		Skin.		Other or unspecified organs.		Totals.	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
Mill Hill and South ..	1	..	2	5	2	..	1	1	..	..	..	..	..	..	..	..	..	..	5	6
Westfield ..	2	..	6	5	5	..	2	2	..	2	..	..	..	..	..	..	..	..	13	9
Blenheim ..	4	..	14	12	3	..	4	4	5	5	1	..	..	..	..	..	..	..	24	26
Central ..	3	..	5	8	2	..	5	2	2	2	2	..	5	2	1	..	2	2	17	19
Woodhouse ..	1	..	6	4	2	1	2	2	..	2	..	..	2	..	..	..	..	..	12	9
North ..	1	1	10	7	2	2	..	..	..	5	..	..	1	3	..	..	..	..	15	18
Far Headingley ..	..	..	5	9	1	3	1	1	2	..	..	..	1	2	..	..	..	..	7	18
Hyde Park ..	2	..	7	12	3	1	2	2	..	..	..	..	1	..	..	..	..	..	14	18
Kirkstall ..	3	1	8	8	2	2	1	1	..	..	..	..	..	2	1	..	2	1	15	19
Burmantofts ..	2	..	14	8	3	2	2	1	..	..	..	..	2	1	..	..	..	..	22	14
Harehills ..	..	..	7	6	..	..	2	2	1	..	..	..	3	2	..	..	..	..	12	15
Potternewton ..	1	..	7	5	1	1	5	..	..	4	..	..	1	1	..	..	..	..	10	17
Roundhay ..	1	1	10	7	..	..	..	..	1	..	..	..	..	..	..	..	..	..	11	14
Cross Gates & Temple Newsam ..	..	..	7	3	..	..	1	..	..	2	..	..	3	..	..	..	..	..	11	6
Richmond Hill ..	1	1	9	4	4	..	4	4	..	4	..	..	1	2	..	..	..	..	16	15
Osmondthorpe ..	2	..	8	9	3	1	1	1	1	6	..	..	1	..	..	..	..	..	16	18
East Hunslet ..	3	..	6	4	1	..	3	3	2	..	..	..	..	1	..	..	..	3	13	14
Hunslet Carr and Middleton ..	1	..	7	7	1	..	4	4	..	..	..	..	1	1	..	..	..	10	13	13
West Hunslet ..	..	..	6	7	4	1	4	4	2	..	..	..	..	1	..	..	..	12	20	20
Beeston ..	..	..	6	6	3	..	1	1	..	..	..	..	1	..	..	..	..	11	11	11
Holbeck (South) ..	2	..	6	5	1	..	5	5	1	..	..	..	1	..	..	..	..	11	11	14
Holbeck (North) ..	5	..	13	8	1	..	3	3	..	..	..	..	..	..	..	..	..	19	13	13
Armley and New Wortley ..	3	1	8	10	7	..	4	4	..	..	..	..	1	..	..	..	..	21	17	17
Upper Armley ..	3	..	11	8	2	..	3	3	..	..	..	..	..	1	..	..	..	16	15	15
Bramley ..	..	..	10	7	1	2	1	1	2	..	..	..	..	..	..	..	..	..	12	17
Farnley and Wortley ..	3	..	10	7	4	..	4	4	..	..	..	..	5	2	..	..	..	22	18	18
City ..	44	5	208	181	58	16	64	64	20	82	1	82	31	24	5	1	20	24	367	393

Food Poisoning.—During the year only four cases of suspected food poisoning were notified under Section 45 of the Leeds Corporation Act, 1930. All four patients were members of the same family. Exhaustive enquiries were made but neither in the food partaken of by them nor in specimens of their blood, urine or faeces were any suspicious micro-organisms found. One of the patients died and an inquest was held. An open verdict was returned by the Coroner who said that on the evidence submitted he was not able to state the cause of the poisoning.

In view of the suggestion recently made by the Medical Officer of Health of Newcastle that bacillary dysentery is endemic in the North of England, and that the disease is usually masked under the name of "food poisoning," which in most areas is not notifiable, the following figures are of some importance. In Section 45 of the Leeds Corporation Act, 1930, all cases of food poisoning occurring in the city are made notifiable, and the condition is statutorily defined as "illness of whatever severity, due to, or suspected to be due to the ingestion of food which has been contaminated with the bacilli of the salmonella or botulinus groups or their toxins, or with metallic poisons, *e.g.*, lead, arsenic and antimony." The definition is, therefore, sufficiently comprehensive to embrace all cases which might give dysenteric symptoms. This Act came into force in August, 1930, and all medical practitioners in the city were notified regarding the regulations. From that date until the end of the year 1932, only 14 cases have been notified as "food poisoning." All of these cases were investigated by members of the Health Department, and in only one of the cases did bacteriological examination show the presence of the *B. dysentericae* (Flexner). From these results the conclusion can be drawn that in Leeds both food poisoning and bacillary dysentery are rare.

Epidemic Catarrhal Jaundice.—No case of this disease was reported during the year.

Handling of Food, etc., by Infected Persons.—It was not found necessary to exercise the powers conferred by Section 42 of the Leeds Corporation Act, 1930 during 1932.

AMBULANCE WORK AND DISINFECTION.

Ambulance Work.—During the year under review 3,188 cases were removed by the ambulances to Seacroft Hospital, Killingbeck Sanatorium and other hospitals or lying-in institutions. In addition 8 small-pox contacts were conveyed to the Isolation Cottages at the City Hospital, two puerperal cases on behalf of the West Riding County Council, and 11 typhoid cases from Malton were conveyed to Seacroft. Over and above these, 623 other journeys were made for the transference of patients from one institution to another or for returning patients home on discharge from hospital.

The following are details of the cases removed to hospital by the ambulances, viz. :—

Smallpox	—
Scarlet Fever	920
Diphtheria	1,026
Typhoid	11
Measles	79
Tuberculosis	179
Other Diseases	233
Maternity	740
TOTAL	3,188

(As compared with 3,732 in 1931).

The total mileage run by the ambulances was 36,215, compared with 35,517 during 1931.

There are now three ambulances for infectious diseases, one for maternity cases and three bedding vans.

Disinfection.—The following work was done by the disinfecting staff, viz. :—

Houses disinfected	2,540
Rooms	5,527
Beds and Mattresses	3,315
Articles of bed linen	20,979
Articles of clothing	23,947
Other articles	6,002

Disinfectant baths were provided and disinfection of clothing carried out in respect of 305 infectious disease contacts.

The total mileage run by the disinfection and bedding vans was 18,804.

Verminous Persons.—The number of verminous persons dealt with at the cleansing station was 396, while 242 rooms in 104 houses, and 6,416 articles of clothing and bedding were disinfested.

BACTERIOLOGICAL WORK.

The following is a complete summary of the work done for the Health Department by the Department of Pathology and Bacteriology in the Leeds University Medical School, under the supervision of Professor James W. McLeod, the City Bacteriologist.

GENERAL.

Nature of pathological or bacteriological investigation.	Number of specimens.
Diphtheria—	
Swabs for Kleb Loeffler bacillus	3,136
Virulence Tests	3
Scarlet—	
Swabs for haemolytic streptococci	13
Tuberculosis—	
Sputum for tubercle bacillus	1,575
Sputum for tubercle bacillus (concentration tests) ..	3
Typhoid—	
Faeces and urine for typhoid group of organisms ..	76
Agglutination (Widal) Test for typhoid group ..	88
Other—	
Sputum for organisms	14
Chest fluid for organisms	8
Pus for organisms	12
Urine for organisms, cells, and T.B.	14
Blood for organisms	6
Guinea Pig Inoculations—	
Pathological Fluids	11
Milk for guinea pig inoculation	178
Food Investigations—	
Milk for bacterial count	1
Examinations of dried milk	10
Examinations of Shellfish	16
Water Investigations—	
Water bacteriological examinations	75
Miscellaneous Examinations—	
Throat swabs for organisms	19
Faeces for organisms	13
Cerebro-spinal fluid	9
Agglutination Test for dysentery	1
Total	5,281

LEEDS CITY HOSPITAL

(Seacroft).

REPORT FOR THE YEAR ENDING**DECEMBER 31st, 1932**

BY

J. S. ANDERSON, M.A., M.D., Ch.B., D.P.H.,

Medical Superintendent.

Admissions.—Patients admitted during the year numbered 2,347, a decrease of 532 on the figure of the previous year.

Direct admissions from outside the city boundaries numbered 51, consisting largely of patients suffering from typhoid fever. During the year 171 patients were admitted from the Leeds General Infirmary, and 102 from other medical institutions in Leeds.

The daily average number of patients in Seacroft Hospital was 220.6 compared with 261.4 during the previous year. The greatest daily number of patients was 315 and the lowest 110.

The average length of stay in hospital for 2,322 patients whose treatment was completed, was 35.9 days, as compared with 35.1 days in 1931.

Smallpox Hospital.—No patients were admitted during the year.

Quarantine Cottages.—There were no admissions during the year.

Death-rates.—The case mortality for all cases was 3.9 per cent. as against 4.9 per cent. in 1931. Diphtheria was the chief contributor.

Meteorological Records.—These continue to be kept at Seacroft Hospital.

Diphtheria.—During the year 878 patients were admitted as compared with 984 in 1931. From a study of the trend of the disease in Leeds, it appears that 1931 was the peak of what appears to be an epidemic wave of modest proportions. The number of patients discharged on completion of treatment was 867, in respect of whom the average stay in hospital was 43.3 days.

Death-rate.—During the year 50 deaths were attributed to diphtheria, giving a death-rate of 5·5 per cent., as compared with 8·4 per cent. in 1931, and 5·4 per cent. in 1930. Of the deaths, four followed tracheotomy.

Type of the Disease.—In the two previous annual reports, it was noted that there was a distinct tendency for the disease to assume a more severe type. This has continued. As this aspect has been dealt with at length in publications in medical journals, further reference need not be made to it here.

Forms of the Disease.—The patients who completed treatment were classified as follows :—

Site of Disease.	Number of Cases.	Percentage of Total Cases.	Deaths.
Fauces and naso-pharynx ..	816	89·0	46
Fauces and larynx ..	15	1·6	2
Larynx	22	2·4	2
Nose	26	2·8	..
Miscellaneous, bacteriological	38	4·2	..
Total	917	100·0	50

Treatment.—The glucose and insulin treatment of the more severe cases has been continued throughout the year. The routine has been to administer 20,000 units of antitoxin intramuscularly on admission, and to follow this in two to three hours with 40,000 units intravenously. The latter dose of antitoxin is accompanied by 40 cubic centimetres of a 50 per cent. solution of glucose in distilled water, while 10 to 20 units of insulin are given intramuscularly. The treatment is repeated daily as indicated. The number of glucose administrations varied from one to eleven, the average being 2·4. Among the glucose treated patients, the serum dosage varied from 40,000 to 180,000 units, the average dose being just over 89,000 units. Included in the 43 patients who received glucose, were 10 who were classified as severe but not malignant. There were 10 malignant cases all haemorrhagic and all fatal; six died within 24 hours of admission to hospital. Details are as follows :—

	Number of Patients.	Deaths.	Mortality per cent.	Recovered Cases.	
				Number of paralysis cases.	Percentage of paralysis cases.
Malignant ..	33	20	60.7	11	84.6
Non-malignant ..	10	..	..	7	70.0

Diphtheria Carriers.—Apart from ordinary lines of treatment, removal of tonsils and adenoids was carried out in 32 cases during the year. The operation was attended by success in all but two cases. The shortest interval between operation and the discharge of the patient was 8 days, and the longest interval 40 days. The average interval was 16.2 days.

COMPLICATIONS.

					Number of patients.	Percentage of total patients.
All complications .. ..	..	..	..	..	202	22.3
Paralysis :						
All types .. ..	..	..	..	..	176	19.2
Eye .. ..	..	..	..	..	136	14.8
Palate .. ..	..	..	..	..	117	12.7
Pharynx .. ..	..	..	..	..	20	2.2
Other types .. ..	..	..	..	..	17	1.8

Laryngeal Diphtheria.—Intubation was not performed on any patient during the year. Details of patients treated by tracheotomy are as follows :—

Type of Disease.	Number of patients.	Deaths.	Mortality per cent.
Laryngeal	4	2	50.0
Faucial and laryngeal ..	5	2	40.0
All types	9	4	44.4

Return Cases.—These numbered twelve during the year, the rate accordingly being 1·3 per cent.

Cross Infection.—There were 28 cases of cross infection in the diphtheria wards during the year. This figure includes 13 in whom the secondary disease was in the stage of incubation on admission. Most of the cases were the result of one outbreak of chickenpox. Of patients who completed treatment, 3·0 per cent. developed an additional infection, or 1·6 per cent., if the number in the stage of incubation on admission is excluded.

Amended diagnosis.—In 163 cases, it was found necessary to change the diagnosis of diphtheria after admission. This is equivalent to 15·6 per cent. of all notified cases of diphtheria admitted to hospital. The details of the final diagnosis were as follows :—

Asthma and bronchitis	..	I
Bronchitis	.. ..	I
Erysipelas	.. ..	I
Laryngitis	.. ..	5
Measles	.. ..	4
Pneumonia	.. ..	2
Quinsy	.. ..	6
Retro-Pharyngeal abscess	..	I
Scarlet fever	.. ..	13
Streptococcal septicaemia	..	I
Syphilis	.. ..	I
Teething	.. ..	3
Tonsillitis	.. ..	121
Vincent's angina	.. ..	I
Whooping cough	.. ..	I
No apparent disease	..	1
<hr/>		
Total	.. ..	163
<hr/>		

Scarlet Fever.—During the year, 881 patients were admitted as compared with 1,366 in 1931, and 920 patients were discharged. The average stay in hospital was 38·2 days, as compared with 37·4 in the previous year.

Return Cases.—These numbered 32, or 3·4 per cent. of patients discharged, as compared with 3·5 per cent. in the previous annual period.

Case Mortality.—Nine deaths were recorded during the year, the mortality rate being 0·97 per cent. as compared with 1·0 per cent. in 1931. The disease continued to be mild.

Types of the Disease.—Details of the types of disease are as follows :—

Type.	Cases.	Deaths.
Septic	19	4
Toxic	1	1
Surgical	35	3

Complications.—Septic complications showed a distinct increase in 1932. This may have been associated with a considerable decrease in the number of antitoxin treated patients.

SCARLET FEVER.

PERCENTAGE INCIDENCE OF PRINCIPAL COMPLICATIONS.

Principal complications.	Total number of cases.	Percentage incidence.
Adenitis (suppurative in 18 cases) ..	109	11·7
Albuminuria and nephritis	36	3·8
Otorrhœa	78	8·4
Rheumatism	21	2·2
Rhinitis in convalescence	64	6·8

Scarlatinal Antitoxin.—Owing to the mildness of the disease, the use of antitoxin was more restricted than in former years. A total of 56 patients received this treatment, this number including three of the nine patients whose deaths were attributed to scarlet fever. Almost all of the acute cases received antitoxin. In the older patients, recourse was had to the intravenous route, while in very young children, the serum was given intramuscularly. Apart from occasional rigors, no disagreeable or untoward results followed the employment of intravenous antitoxin. The details are as follows :—

Treatment by Intravenous Antitoxin :—

Total cases 20 (1 death)

Treatment by Intramuscular Antitoxin :—

Total cases 36 (2 deaths).

Treatment of Ear Conditions.—The number of patients did not permit of the opening of a ward for the treatment of ear complications of scarlet fever. During the year there were 78 cases of otitis media and two cases of otitis externa. Mastoid antrotomy was performed on four patients, a bilateral operation being necessary in two. Removal of tonsils and adenoids in three patients led to a cure of otorrhoea in one only. For various reasons, 14 patients were discharged with persistent otorrhoea, but in the majority of cases the otorrhoea was chronic and non-scarlatinal in origin.

The services of Mr. W. Maxwell Munby, F.R.C.S., continued to be available for dealing with ear, nose and throat conditions.

Cross Infection.—There were 43 cases of cross infection, including three in whom the disease was in process of incubation on admission. Cross infection was mainly due to measles. Of patients who completed treatment, 4.6 per cent. developed an additional infection.

Amended diagnosis.—In 47 cases, it was found necessary to change the diagnosis of scarlet fever after admission. This is equivalent to 5.0 per cent. of all notified cases of scarlet fever admitted to hospital. Details of the final diagnosis were as follows :—

Bronchitis	..	..	..	1
Chickenpox	..	..	..	1
Dermatitis	..	..	..	1
Diphtheria	..	..	..	3
Erythema, simple	..	..	..	1
Influenza	..	..	..	4
Measles	..	..	..	7
Rubella	..	..	..	6
Teething	..	..	..	1
Tonsillitis	..	..	..	5
Detained for observation	..	..	..	15
Pediculosis	..	..	..	1
Urticaria	..	..	..	1
				—
Total	..	..	..	47

Measles.—During the year a moderate epidemic in the City necessitated the opening of a ward for the reception of cases of measles. Admissions numbered 86 and the mortality rate was 6·9 per cent. A dearth of suitable donors made it impossible to obtain a supply of convalescent serum for prophylactic purposes.

In one of the cases, convalescence was interrupted by the occurrence of meningo-encephalitis. This rare complication developed in a child of 2 years, on the 15th day, and the symptoms included stupor, head retraction and, to a slight degree, Kering's sign. The cerebro-spinal fluid showed a great increase of pressure and was slightly turbid from the presence of lymphocytes. Albumen was increased, and reduction of Fehling's Solution was noted. The fluid was sterile on culture. From the onset pyrexia gradually increased to 104·5 which was recorded for two days, and then gradually subsided, the whole pyrexial period being 10 days. Recovery was complete. The child had not been vaccinated recently.

Typhoid Fever.—One patient was carried over from the admissions in 1931 and 44 were admitted during the year. This unusually large number was mainly due to admissions from Malton where there was an extensive outbreak in October and November. One case was associated with another outbreak at Denby Dale, but developed the disease after taking up residence in a scholastic institution. Only four cases could be properly assigned to Leeds, and, of these, two were carriers.

Amended Diagnosis.—In eight additional cases the diagnosis was not confirmed, the amended diagnoses being :—

Influenza and otitis media	1
Pneumonia	2
Bronchitis	1
For observation	4

Age Distribution :—

5 or under	..	..	2
6-15	..	..	15
16-25 ..	..	..	11
26-35 ..	..	..	8
36 or over	..	..	4

Death-rate.—Two deaths were recorded, the ages being 6 and 32 years. This is equivalent to a mortality rate of five per cent., a low figure attributable to the age distribution and to the mildness of the Malton outbreak.

Types of Disease :—

Abortive	..	..	..	1
Mild	..	..	..	15
Moderate	..	..	..	18
Severe	..	..	..	6

Relapses.—Five were recorded. In one case, a mild initial attack was followed by a fatal relapse. In no case was a second relapse noted.

Note on Symptoms.—The frequency with which the principal symptoms occurred is given. Rash 26 cases (65 per cent.); enlargement of spleen 11 cases (27.5 per cent.); enlargement of liver 5 cases; epistaxis 4 cases; delirium 8 cases; albuminuria 4 cases; meteorism and twitching of tendons one case each.

Complications.—The following complications were noted :—furunculosis, phlebitis, and tender toes two cases each; abscesses three cases; abortion, cystitis, periostitis and pneumonia one case each.

Cerebro-Spinal Fever.—Six patients were admitted with one death giving a mortality rate of 16.6 per cent. As the cases were of sporadic occurrence, this low rate has little significance. The average dose of serum was 110 cubic centimetres, administered intrathecally in all cases except one, an infant who recovered and who received an intra-peritoneal injection. The ages of the recovered cases were 1, 2, 17, 20 and 30 years, while that of the fatal case was 37 years. The last mentioned developed hydrocephalus and also showed marked corneal ulceration. Only one of the recovered cases was complicated, infective arthritis and marked strabismus being noted.

Puerperal Fever.—During the year, 21 patients completed treatment as compared with 34 in 1931. There were no deaths. Of the patients, nine were found to be suffering from local uterine sepsis, three from pelvic cellulitis, and the others from miscellaneous conditions such as cystitis, phlegmasia, pulmonary tuberculosis and abortion. Colpotomy was performed in one case, and an abscess drained through the abdominal wall in another.

The services of Mr. Carlton Oldfield continued to be available.

Smallpox.—No cases of smallpox were admitted during the year. In two suspected cases, the final diagnosis was chickenpox in the one case, and erythema multiforme in the other.

Miscellaneous Cases.—A case of herpes zoster is of interest as the patient was removed from a ward in a children's hospital at the request of the medical officer owing to the association of that disease with chickenpox. In spite of this precaution, another child on the same ward developed chickenpox 17 days after the appearance of the herpes zoster eruption and 14 days after removal of the zoster child. No other source of infection was discovered.

MISCELLANEOUS CASES.

Disease.	Total number of cases.	Deaths.
Infectious Diseases :—		
Erysipelas	143	10
Chickenpox	20	1
Rubella	8	..
Mumps	12	..
Whooping Cough	11	1
Influenza	2	..
Pulmonary Diseases :—		
Asthma	1	..
Bronchitis	6	..
Diseases of the Nose and Throat :—		
Laryngitis	3	..
Quinsy	9	..
Retro-pharyngeal abscess	2	..
Sinusitis	1	..
Syphilis	1	..
Tonsillitis	128	3
Vincent's angina	1	1
Diseases of the Skin :—		
Dermatitis	3	..
Erythema multiforme	1	..
Herpes facialis	1	..
Herpes zoster	1	..
Impetigo	1	..
Urticaria	3	..
Other Diseases :—		
Adenitis	3	..
Carcinoma ventriculi	1	1
Cellulitis	3	..
Cellulitis and septicaemia	3	3
Infantile diarrhoea	6	1
Lymphangitis	1	..
Mastoiditis	1	..
Meningitis, tuberculous	2	2
Otitis media	2	..
Pediculosis	1	..
Rheumatism, sub-acute	1	..
Teething	3	..
Vulvitis	1	..
Observation for diphtheria	1	..
Observation for whooping cough	2	..
Observation for scarlet fever.. .. .	20	..
Observation for typhoid fever	3	..
Admitted with mother	5	..
Total	417	23

Sickness of Staff.—The health of the staff remained good throughout the whole year, the number “warded” being smaller than usual. The details of staff illnesses are as follows:—

Nature of Illness.	Staff.			Days in Hospital.		
	Nursing.	Do-mestic.	Male.	Nursing.	Do-mestic.	Male.
Scarlet fever	1	..	..	35	..	..
Diphtheria	5	1	..	234	21	..
Mumps	1	..	..	9	..	..
Tonsillitis	2	..	..	18	..	..
Lymphangitis .. ..	..	1	..	..	5	..
Acute bronchitis	1	..	1	9	..	11
Carcinoma ventriculi .. ..	..	..	1	..	..	47
Sub-acute rheumatism .. ..	..	1	..	..	7	..
Axillary abscess	1	..	..	42	..	..
Total	11	3	2	347	33	58

Immunisation of the Nursing Staff.—Routine immunisation of the nursing staff against diphtheria and scarlet fever is carried out. As regards typhoid fever, only members of the staff engaged in nursing this disease receive prophylactic injections of vaccine. It has not been considered necessary to immunise the domestic staff as the incidence of infectious disease has been so low that it is doubtful if immunisation would give an adequate return.

Diphtheria.—Statistics are given below showing Schick test results and the number immunised. During the whole period, toxoid-antitoxin floccules were employed. This material has given remarkably mild reactions, and in all probability results in the more rapid development of immunity.

Result of Schick Test.		Total Positive Reactors.	Total Negative Reactors.	Number Immunised.	Total Immunised.
+	11	18 (37·5%)	..	13	19
Ps +	2		..	2	
±	4		..	3	
Ps ±	1		..	1	
-	27	..	30 (62·5%)	..	..
Ps -	3	..		..	..

± = weakly positive reaction.

+ = positive reaction.

- = negative reaction.

Five nurses contracted diphtheria in the course of the year. The details are of interest :—

M.B.—Received three inoculations of T.A.F. on joining staff.

Eight weeks after last inoculation, contracted moderate faucial diphtheria. Gravis type of bacillus. Schick test 12 hours before administration of antitoxin, positive.

G.M.F.—Received three inoculations of T.A.F. 9 months later, contracted mild faucial diphtheria with definite membrane formation. Gravis type of bacillus. Schick test, performed one hour before administration of antitoxin, negative.

E.M.—Received three inoculations of T.A.F. 6 months later, contracted mild faucial diphtheria with definite membrane formation. Swab positive (Type not ascertained). No antitoxin given. Schick negative at onset of disease.

F.P.—Schick pseudo-negative on joining staff. Five months later contracted mild faucial diphtheria with definite membrane formation. Gravis type of bacillus. Schick positive (test performed one hour before administration of antitoxin).

E.S.—Received three inoculations of T.A.F. A year later, contracted moderate faucial diphtheria. Gravis type of bacillus. Schick test, performed one hour before administration of antitoxin, slightly positive.

The following nurse was inoculated in 1932 and has since contracted diphtheria :—

B.M.—Received three inoculations of T.A.F. Four months later, contracted moderate faucial diphtheria. Gravis type of bacillus. Schick test, performed the day before anti-toxin was administered, negative.

Scarlet Fever.—Statistics are given below showing Dick test results and the number immunised. The practice of giving 500, 2,000, 5,000 and 20,000 skin doses of scarlatinal toxin has been continued.

The statistics regarding immunisation are as follows :—

Result of Dick Test.			Total Positive Reactors.	Total Negative Reactors.	Number Immunised.	Total Immunised.
+	6	..	7 (14·5%)	..	6	7
Ps +	—	..		..	..
±	1	..		..	1	
Ps ±	—	..		..	..
—	40	..	..	41 (85·5%)	..	..
Ps—	1	..	..		..	..

± = weakly positive reaction

+ = positive reaction.

-- = negative reaction.

One nurse contracted scarlet fever during the year. She was ascertained to be Dick positive on joining the staff and was given four inoculations of scarlatinal toxin. The illness developed within three days of the final inoculation of 20,000 skin doses of toxin, and may possibly have been an example of the scarlatinal syndrome following inoculation.

Laboratory.—For diagnostic and discharging purposes, 7,089 throat, nose, ear, and skin swabs were examined for diphtheria bacilli.

The following additional examinations were made :—

Cerebro-spinal fluid	..	..	..	..	18
Faeces (for enterica organisms)	..	..	..	..	92
Urine (for enterica organisms)	..	..	..	..	94
Sewage effluent (for enterica organisms)	..	..	..	..	4
Urine (Chemical and Bacteriological examinations)	..	..	..	..	21
Blood sugars	..	..	..	..	37
Sputum	..	..	..	..	5
Other pathological discharges	..	..	..	..	7

Publications.—Members of the staff have been associated with the following contributions to medical literature :—

“ Malignant Diphtheria ; treatment with glucose and insulin.”

H. E. de C. Woodcock. *Lancet*, October 22nd, 1932.

“ The Incidence and Correlation with Clinical Severity of Gravis, Mitis and Intermediate Types of Diphtheria Bacillus in a Series of 500 Cases at Leeds.” (With McLeod and others). *Journal of Pathology and Bacteriology*, January, 1933.

“ Starch Fermentation by the ‘ Gravis ’ type of Diphtheria.” (With McLeod and others). *Lancet*, February 11th, 1933.

NUMBER OF ADMISSIONS DURING EACH OF THE
LAST TWENTY YEARS.

YEAR.	Seacroft Hospital.		Small Pox Hospital.	Admitted to all Hospitals.	Cottages for Contacts.	Total No. Admissions.
	Infectious Diseases.	Tuberculosis.				
1913-14	2,383	*528	..	2,911	52	2,963
1914-15	2,233	*597	5	2,835	38	2,873
1915-16	1,999	*399	1	2,399	29	2,428
1916-17	1,440	*482	..	1,922	11	1,933
1917-18	1,366	*545	..	1,911	6	1,917
1918-19	1,349	*421	..	1,770	8	1,778
1919-20	2,668	*378	..	3,046	33	3,079
1920-21	2,148	..	..	2,148	4	2,152
1921-22	2,430	..	..	2,430	6	2,436
1922-23	3,265	..	1	3,266	18	3,284
1923-24	2,185	..	..	2,185	16	2,201
1924-25	2,033	..	8	2,041	73	2,327
1925-26	1,944	..	4	1,948	8	1,956
1926-27	1,632	..	3	1,635	9	1,644
1927-28	1,793	..	81	1,874	186	2,060
**1928-29	4,059	*51	46	4,156	39	4,195
†1929	4,171	..	24	4,195	9	4,204
1930	3,554	..	42	3,596	29	3,625
1931	2,874	..	5	2,879	4	2,883
1932	2,347	..	..	2,347	..	2,347

*Beds set apart for cases of tuberculosis in Seacroft hospital.

**Ward taken over at Holbeck Infirmary for scarlet fever patients for three months.

†Year ending December 31st instead of March 31st.

LEEDS CITY HOSPITALS, SEACROFT, LEEDS.

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YEAR 1932.

ABSTRACT FROM REGISTERS.

	Small Pox.	Measles.	Scarlet Fever.	Diphtheria.	Enteric Fever.	Pneumonia.	Infantile Diarrhoea.	Other Diseases.	For Quarantine Cottages.	TOTAL.
Patients remaining in Hospitals and Isolation Cottages, on Thursday, December 31st, 1931	1	154	148	1	2	..	17	..	323
Admitted from January 1st, 1932 to December 31st, 1932	86	881	878	44	9	..	449	..	2,347
Total treated	87	1,035	1,026	45	11	..	466	..	2,670
Discharged	81	920	867	23	7	..	424	..	2,322
Died	6	9	50	2	4	..	24	..	95
Mortality per cent.	6.9	1.0	5.5	8.0	36.3	..	5.4	..	3.9
Patients remaining in Hospitals and Isolation Cottages, on Saturday, December 31st, 1932	106	109	20	..	..	18	..	253
Average stay in Hospital for recovered patients	23.0	38.2	43.3	45.7	20.9	..	17.9	..	35.9

METEOROLOGICAL RECORD.

1922.	SUNSHINE.			•WIND—FORCE.			EARTH TEMPERATURE. (4' 0" below surface).		
	SUN- SHINE. Total, hr. min.	Date.	No. of days no Sunshine.	Daily Average, miles per hour.	Max. in 24 hrs. miles per hour.	Max.	Date.	Min.	Date
January	.. 61.00	8-25	12	..	..	43.0	9-25	41.5	4-31
February	.. 88.10	27	6	..	..	41.5	3-6	39.0	21-22
March ..	.. 132.50	8	5	..	..	40.5	30-31	38.5	12-20
April ..	.. 154.10	23	..	..	..	42.5	26-30	40.0	4
May ..	.. 124.30	5-10	5	..	..	48.0	24-30	43.0	1-4
June ..	.. 200.20	14-17	1	..	..	53.0	29	48.0	1
July ..	.. 153.40	25	1	..	..	56.0	15-31	52.5	1-2
August	.. 160.20	31	4	..	..	58.0	18-31	56.0	1-10
September	.. 178.30	3	2	..	..	58.0	2	54.0	30
October	.. 102.0	2	4	..	..	54.0	1	49.5	29-30
November	.. 37.10	5	13	..	..	49.5	1	45.5	27-30
December	.. 46.50	3	12	..	..	46.0	1	42.0	14-16
Year	.. 1439.30	June 14-17	65	..	..	58.0	Aug. 18- Sept. 2	38.5	Mar. 12-20

• Anemometer out of order

METEOROLOGICAL RECORD.

(Observations made at 9.30 a.m.).

HEIGHT FROM GROUND:—Barometer, 2 ft.; Thermometers, 4 ft.; Rain Gauge, 1 ft. (235 ft. above sea-level).

1932.	*BARO- METER, 9-30 a.m.	TEMPERATURE.				RAINFALL.				WIND—No. of Observations.															
		Shade—Minimum and Maximum.			Mean.	Total Inches.	Max. in 24 hrs.	Date.	No. of days on which 'or' or more fell	N.	N.N.E.	N.E.	E.N.E.	E.	E.S.E.	S.E.	S.S.E.	S.	S.W.	W.S.W.	W.	W.N.W.	N.W.	N.N.W.	
		Min.	Date.	Max.																					Date.
January	30.077	42.0	19	8-26	66	11-13	1.78	.73	6	12	—	1	—	—	—	—	3	1	6	5	11	—	3	—	1
February	30.576	37.2	20	10	55	23	0.43	.18	9	8	—	5	10	3	—	—	—	—	—	1	1	—	2	2	5
March ..	30.010	38.6	17	11	56	26	1.62	.43	22	10	—	3	3	—	2	1	2	1	1	3	4	1	3	4	2
April ..	29.790	42.0	26	2-12	64	27	2.11	.23	7	21	—	1	4	3	—	1	2	1	—	—	2	5	2	7	2
May ..	29.916	47.7	25	7	72	20	5.40	1.70	21	19	—	2	9	3	—	—	1	1	—	2	2	2	1	1	3
June ..	30.176	55.1	34	5	75	12-17	0.31	.19	30	5	1	5	10	1	—	2	1	2	—	1	—	3	2	1	1
July ..	29.927	59.0	44	17	82	10	3.21	1.35	11	13	—	3	5	—	—	—	1	1	—	2	4	8	2	1	
August ..	30.160	60.1	43	1	85	11	1.47	.61	20	5	—	4	4	5	—	—	1	2	—	1	4	4	1	3	
September	29.898	52.7	28	21	74	16	1.79	.47	2	15	—	1	2	—	—	—	1	1	—	1	7	9	—	2	
October..	29.676	44.5	25	28	60	7-23	3.56	.82	21	16	—	2	2	—	—	—	2	2	—	1	3	7	—	5	
November	30.055	41.6	26	5	59	1	1.65	.28	30	13	—	1	7	2	—	—	1	1	—	1	7	5	—	—	
December	30.054	39.9	25	26	57	17	1.12	.29	29	13	—	—	7	1	—	1	4	1	—	1	11	2	—	2	
Year ..	30.026	46.7	17	Mar. 11	85	Aug. 11	24.45	1.70	May 21	150	1	28	63	18	2	7	17	14	2	17	49	61	9	30	
																								27	
																								21	

• Corrected to temperature and mean sea level at Liverpool.

E = 41.1%.

W = 58.9%.

VENEREAL DISEASES.

The number of deaths certified as due to syphilis during the year was 17, which is equal to a death-rate of 0.04 per thousand of the population. Of these, seven were children under one year of age—six males and one female; ten adults—one male and one female between 15 and 25; one male between 25 and 45; five males between 45 and 65; and two males over 65. The number of deaths in 1932 shows a decrease of nine as compared with the previous year.

Work of the Treatment Centre.—The total number of new cases registered at the Centre at the Leeds General Infirmary from Leeds and the other contributory areas was 2,034. Increases were recorded in gonorrhoea, male 115, female 4, other diseases not venereal, male 94; and decreases in syphilis, male 124, female 58, and other diseases not venereal, female 11. There was, therefore, a nett total increase of all types of 20 as compared with the figure for the previous year. (*Vide* table on page 94).

Turning to Leeds cases the total number of new cases registered was 1,610, comprising 238 males and 139 females suffering from syphilis, 590 males and 112 females suffering from gonorrhoea, and 413 males and 118 females suffering from other diseases not venereal. As compared with the previous year these figures represent in the case of syphilis a decrease of 113 males and 44 females, in gonorrhoea an increase of 120 males and 19 females, and in other diseases not venereal an increase of 85 males and a decrease of 20 females. Taking the cases of all types there was a nett total increase of 47. (*Vide* table on page 94).

The total attendances of all Leeds cases was 71,439, an increase of 8,756 on the figure for the previous year.

The number of cases ceasing to attend before completion of treatment or final tests of cure was 455 as compared with 493 for the previous year.

The number of in-patients treated at the Leeds General Infirmary was 14 as compared with nine for the previous year, and the corresponding number of in-patient days was 148 and 309.

Institutions.—*Maternity Hospital.*—The number of new cases admitted as in-patients to the Leeds Maternity Hospital decreased from 28 in 1931 to 22 in 1932, namely, 14 syphilis and 8 gonorrhoea. The corresponding number of in-patient days decreased from 436 to 381.

The Hope Hospital.—The number of cases treated was 43 as against 56 for the previous year, whilst the number of new admissions was 30 as compared with 36 for 1931. The number of in-patient days was 5,956 as against 6,369 for the previous year. It should be pointed out, however, that these figures do not include babies admitted with their mothers or born whilst their mothers were in residence.

For a period during the year the number of cases in Hospital had fallen considerably below the figure for any previous year since the opening of the Hospital, and for a time it seemed doubtful whether the beds would ever again be fully occupied. Very soon after, the number of admissions rose and by the end of the year were above the average. It can therefore be said that the Hospital continues to serve a very useful purpose and so long as there is a demand for this type of accommodation it would be foolish to contemplate the closure of the Hospital.

On behalf of the Health Committee I should like once again to place on record our indebtedness to the Hospital Committee, which is purely voluntary, for the good services rendered during the year.

Further particulars of the cases admitted to and treated in the Maternity and Hope Hospitals are given in the table on page 95.

For particulars of the work of the special clinic for mothers and babies suffering from venereal diseases held in connection with Maternity and Child Welfare, see page 162.

Supply of Salvarsan Substitutes.—The number of medical practitioners in the area qualified to receive free supplies of salvarsan substitutes up to the end of the year was 49. The amount of salvarsan substitutes distributed to practitioners was 816 doses as compared with 1,189 in 1931.

LEEDS GENERAL INFIRMARY (LOCAL TREATMENT CENTRE).

Cases on the register on January 1st, 1932 ..	2,237
Old cases re-admitted	32
New cases admitted (including 50 known to have received treatment at other centres)	2,034
Cases ceased to attend	455
Transferred to other centres	172
Discharged on completion of treatment	1,331
Cases on the register on January 1st, 1933 ..	2,345

WORK DONE IN THE DEPARTMENT OF PATHOLOGY AND
BACTERIOLOGY OF THE UNIVERSITY OF LEEDS IN CONNECTION
WITH THE V.D. REGULATIONS.

NATURE OF TEST.	NUMBER OF TESTS.
For detection of spirochetes—	
for treatment centre	43
for practitioners .. .. .	..
for institutions.. .. .	..
For detection of gonococci—	
for treatment centre	1,687
for practitioners	194
for institutions	189
For Wassermann reaction—	
for treatment centre	3,001
for practitioners	323
for institutions	2,712
Other examinations—	
for treatment centre	1,467
for practitioners	26
for institutions	115
TOTAL	9,757

PERSONS TREATED AT THE GENERAL INFIRMARY, LEEDS.
(LOCAL TREATMENT CENTRE).

				Year 1931.		Year 1932.		Increase or decrease.			
				M.	F.	M.	F.	M.	F.		
Syphilis ..	first cases	..	..	455	255	331	197	-124	- 58
Soft chancre	"	..	..	..	..	..	..	..	..
Gonorrhœa	"	..	..	592	139	707	143	+115	+ 4
Other diseases											
not Venereal	"	..	..	403	170	497	159	+ 94	- 11
Total				1,450	564	1,535	499	+ 85	- 65
Total attendances of all cases				76,249		83,949		+ 7,700			
Aggregate No. of In-patient days				309		148		- 161			
No. of doses of Salvarsan substitutes				18,484		18,626		+ 142			
Pathological specimens examined :—											
Spirochetes				55		49		- 6			
Gonococci				4,305		3,824		- 481			
Other organisms .. ..				..		..		..
Blood—Wassermann re- action				3,953		3,967		- 256			

LEEDS PATIENTS.

	Year 1931.		Year 1932		Increase or decrease.	
	M.	F.	M.	F.	M.	F.
Syphilis first cases	351	183	238	139	-113	- 44
Soft chancre .. ..	..	..	..	..	..	..
Gonorrhœa	470	93	590	112	+120	+ 19
Other diseases, not Venereal	328	138	413	118	+ 85	- 20
Total	1,149	414	1,241	369	+ 92	- 45
Total attendances of all cases	62,683		71,439		+ 8,756	
Aggregate No. of In-patient days	191		69		- 122	
No. of doses of Salvarsan sub- stitutes	14,060		14,354		+ 294	
Pathological specimens examined :—						
Spirochetes	46		43		- 3	
Gonococci	3,508		3,154		- 354	
Other organisms .. ..	..		..		..
Blood—Wassermann re- action	3,155		3,001		- 154	

MATERNITY HOSPITAL, 42, HYDE TERRACE.

	Cases in residence on Jan. 2nd, 1932.	Cases admitted.	Cases discharged.	Cases in residence on Dec. 31st, 1932.
Syphilis .. ..	..	14	13	1
Gonorrhœa ..	2	8	10	..
Syphilis and Gonorrhœa ..	..	..	..	..
Other disease ..	..	..	..	..
Total ..	2	22	23	1

Total days in residence 381

No. of doses of Salvarsan substitute .. 39

Pathological specimens examined :—

Spirochetes 14

Gonococci 9

Other organisms 2

Blood—Wassermann reaction.. .. 31

HOPE HOSPITAL, 126, CHAPELTOWN ROAD.

	Cases in residence on Jan. 2nd, 1932.	Cases admitted.	Cases discharged.	Cases in residence on Dec. 31st, 1932.
Syphilis	3(+1)	10(+3)	9(+3)	4(+1)
Gonorrhœa ..	7(+4)	17(+7)	13(+9)	11(+2)
Syphilis and Gonorrhœa ..	3	1	4	..
Other disease ..	..	2	1	1
Total ..	13(+5)	30(+10)	27(+12)	16(+3)

Total days in residence 5,956(+2,502)

No. of doses of Salvarsan substitute .. 184(+21)

Pathological specimens examined :—

Spirochetes 1

Gonococci.. .. 14

Other organisms 137

Blood—Wassermann reaction.. .. 46(+1)

Of the 30 women admitted, 10 had babies, shown in the above table in brackets.

Tuberculosis.

TUBERCULOSIS.

The total number of names on the tuberculosis register on December 31st, 1932, was 3,495, as compared with 4,109 at the corresponding period of last year, a decrease of 614.

There were added to the register during the year on account of fresh notifications and inward transfers 736 names, and removed from the register on account of cancellations owing to death, removal from the city, and cure or change in diagnosis, 1,350 names. The register is now kept fully up-to-date and it should be noted that the number given above (3,495) is lower than in any year since 1925, when the register was revised.

Statistics.—*Notifications.*—During the year 574 cases of pulmonary and 162 of non-pulmonary tuberculosis were notified, making a total of 736 cases of which 417 were males and 319 females. Compared with the previous year this is a decrease of 92 in the number of notifications of pulmonary tuberculosis and 14 of non-pulmonary and compared with the average of the previous five years a decrease of 152 pulmonary and 17 non-pulmonary. Of the total cases notified 616 were by medical practitioners and 120 came from institutions. The corresponding figures for the previous year were 711 and 131 respectively.

Of the total cases of pulmonary tuberculosis notified during the year 12.9 per cent. were children under 15 years of age and 87.1 per cent. persons over 15 years, the corresponding figures for the previous year being 13.4 per cent. and 86.6 per cent. respectively. The age group which provided the largest number of notifications was 15-25 and the smallest 1-5.

As regards the non-pulmonary type of the disease 56.2 per cent. were children under 15 years and 43.8 per cent. persons over 15 years. The corresponding figures for the previous year were 61.4 per cent. and 38.6 per cent. respectively.

The number of cases of pulmonary tuberculosis not heard of until the time of death was 22 and the number of non-pulmonary 44. In addition there were three posthumous notifications of pulmonary tuberculosis and five of non-pulmonary. There was, therefore, a total of 74 cases of all forms not heard of until after death, an increase of one on the figure for the previous year.

Notifications of tuberculosis received during the year.

PULMONARY.

Ages.	-1	1-5	5-15	15-25	25-35	35-45	45-55	55-65	65+	Total.
Males	4	39	73	61	59	56	34	13	339
Females	3	28	93	54	31	19	5	2	235
Totals	7	67	166	115	90	75	39	15	574

NON-PULMONARY.

Ages.	-1	1-5	5-15	15-25	25-35	35-45	45-55	55-65	65+	Total.
Males ..	2	15	28	15	6	6	2	2	2	78
Females ..	3	13	30	21	10	2	2	2	1	84
Totals ..	5	28	58	36	16	8	4	4	3	162

TUBERCULOSIS.

YEAR	DEATHS.						NOTIFICATIONS.					
	Pulmonary tuberculosis.		Non-pulmonary tuberculosis.		All forms tuberculosis.		Pulmonary tuberculosis.		Non-pulmonary tuberculosis.		All forms tuberculosis.	
	Deaths.	Death-rate.	Deaths.	Death-rate.	Deaths.	Death-rate.	Cases.	Case-rate.	Cases.	Case-rate.	Cases.	Case-rate.
1922	533	1.14	120	0.26	653	1.40	824	1.77	172	0.37	996	2.14
1923	515	1.10	122	0.26	637	1.36	1,002	2.13	197	0.42	1,199	2.55
1924	513	1.09	144	0.31	657	1.40	1,191	2.53	180	0.38	1,371	2.91
1925	511	1.08	88	0.19	599	1.27	1,720	3.64	149	0.32	1,869	3.96
1926	477	1.01	108	0.23	585	1.24	1,299	2.74	161	0.34	1,460	3.08
1927	457	0.96	101	0.21	558	1.17	811	1.70	155	0.32	966	2.02
1928	453	0.95	89	0.19	542	1.14	766	1.61	158	0.33	924	1.95
1929	508	1.06	113	0.24	621	1.30	743	1.55	156	0.33	899	1.88
1930	432	0.90	101	0.21	533	1.11	642	1.34	251	0.52	893	1.87
1931	439	0.90	88	0.18	527	1.08	666	1.37	176	0.36	842	1.73
1932	386	0.80	107	0.22	493	1.02	574	1.18	162	0.33	736	1.52

PULMONARY TUBERCULOSIS.

AGES AT DEATH.

1932.	-5	5-10	10-15	15-20	20-25	25-45	45-65	65+	Total.
Males ..	1	1	1	8	25	79	110	14	239
Females ..	..	..	..	20	29	72	21	5	147
TOTALS	1	1	1	28	54	151	131	19	386
Average 10 years 1922-1931	14	6	9	47	57	193	139	19	484

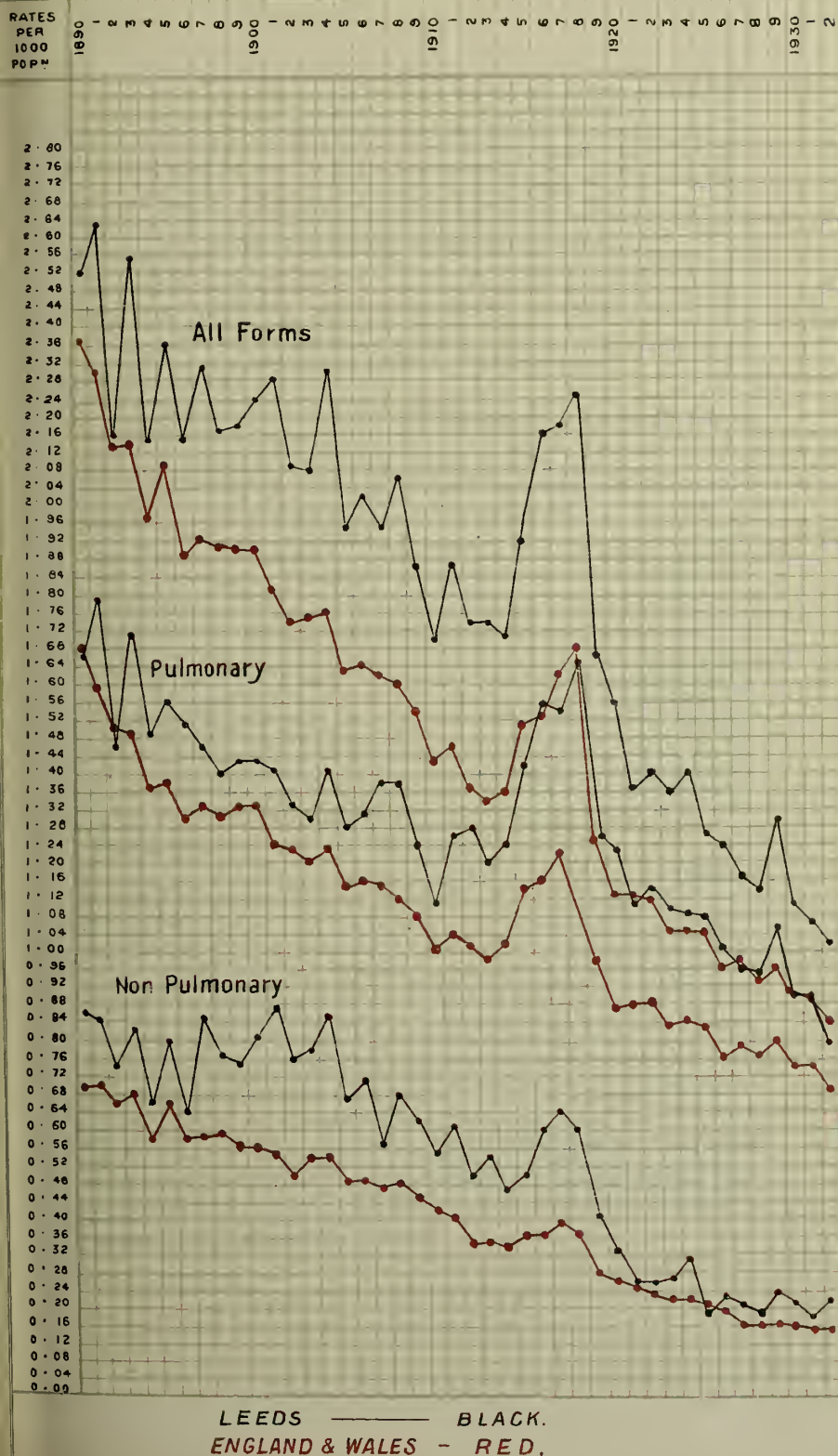
NON-PULMONARY TUBERCULOSIS. DEATHS.

1932.	Tubercular meningitis.	Abdomin- al.	Bones and Joints.	Other tuber- culosis.	Total.
Males ..	25	6	9	13	53
Females ..	24	3	8	19	54
Totals ..	49	9	17	32	107

AGES AT DEATH.

1932	-5	5-10	10-15	15-20	20-25	25-45	45-65	65+	Total.
Males ..	23	5	4	4	4	6	4	3	53
Females	18	8	3	6	2	5	10	2	54
Totals ..	41	13	7	10	6	11	14	5	107
Average 10 years 1922-1931	45	11	6	11	7	13	11	3	107

TUBERCULOSIS DEATH RATE. - 1890 - 1932.



The table on page 106 gives the deaths from all forms of tuberculosis with the year of notification. Out of a total of 493 deaths from tuberculosis of all forms, 180, or 36.5 per cent., were notified in the same year as death occurred, 36, or 7.3 per cent., in the same month, and 52, or 10.5 per cent., in the same week. In the previous year there were 172, or 32.6 per cent., notified in the same year as death occurred, 30, or 5.7 per cent., in the same month, and 52, or 9.9 per cent., in the same week.

An analysis of the notifications in age groups will be found in the table on page 99.

Deaths.—The total deaths from tuberculosis of all types during the year numbered 493 of which 292 were males and 201 females. In the previous year the total was 527, comprising 306 males and 221 females. Of the total, pulmonary tuberculosis accounted for 386, or 78.3 per cent., and non-pulmonary 107, or 21.7 per cent. The death-rate from pulmonary tuberculosis was 0.80, and from non-pulmonary 0.22, making a total death-rate from all forms of the disease of 1.02, as compared with 0.90, 0.18 and 1.08 respectively for the previous year. Set against the average rates of the previous five years, they represent a decrease of 0.15 in the pulmonary rate, an increase of 0.01 in the non-pulmonary, and on the total a decrease of 0.14. The death-rates from pulmonary (0.80) and from tuberculosis of all forms (1.02) were the lowest on record, whilst the death-rate from non-pulmonary tuberculosis (0.22) was the highest recorded in Leeds since 1929 when the rate was 0.24.

It is worthy of comment that the rise in the non-pulmonary mortality figure was in great part due to tuberculous meningitis. An investigation recently carried out by Dr. A. Stanley Griffith into the etiology of tuberculous meningitis, which included a number of Leeds cases, shows that the bovine or milk borne form of the tubercle bacillus is responsible for quite a considerable number of the cases. In consequence of this discovery every death certified as being due to tuberculous meningitis is referred to the Chief Veterinary Officer who makes an enquiry into the milk supply with the object of ascertaining whether the infection came from that source. The result of these enquiries in more than one instance has been the discovery of a cow or cows suffering from active disease and giving tuberculous milk.

TUBERCULOSIS—DEATHS AND RATES IN WARDS.

MUNICIPAL WARD.	Pulmonary Tuberculosis.		Non-Pulmonary Tuberculosis.		All Forms Tuberculosis.	
	Deaths.	Death-rate.	Deaths.	Death-rate.	Deaths.	Death-rate.
Mill Hill and South..	16	1.01	8	0.51	24	1.52
Westfield	22	1.12	2	0.10	24	1.23
Blenheim	19	0.83	5	0.22	24	1.05
Central	16	0.76	1	0.05	17	0.81
Woodhouse	12	0.64	3	0.16	15	0.80
North	7	0.45	4	0.26	11	0.71
Far Headingley ..	11	0.60	1	0.05	12	0.66
Hyde Park	11	0.67	4	0.24	15	0.91
Kirkstall	15	0.76	4	0.20	19	0.97
Burmantofts	21	0.91	6	0.26	27	1.17
Harehills	16	0.81	5	0.25	21	1.06
Potternewton	6	0.31	1	0.05	7	0.36
Roundhay	6	0.39	..	..	6	0.39
Cross Gates and Templenewsam ..	6	0.41	5	0.34	11	0.76
Richmond Hill ..	35	1.43	11	0.45	46	1.88
Osmondthorpe ..	28	1.29	7	0.32	35	1.61
East Hunslet	13	0.70	4	0.22	17	0.92
Hunslet Carr and Middleton	14	0.70	5	0.25	19	0.95
West Hunslet	21	1.16	4	0.22	25	1.38
Beeston	13	0.85	1	0.07	14	0.92
Holbeck (South) ..	9	0.63	5	0.35	14	0.98
Holbeck (North) ..	17	0.93	9	0.49	26	1.42
Armley and New Wortley	22	1.09	3	0.15	25	1.23
Upper Armley	7	0.41	3	0.18	10	0.59
Bramley	10	0.57	3	0.17	13	0.74
Farnley and Wortley	13	0.70	3	0.16	16	0.86
City	386	0.80	107	0.22	493	1.02

Comparative rates, England and Wales, and other towns.—The provisional death-rates for England and Wales for the year were from pulmonary tuberculosis 0·69, from non-pulmonary 0·15, making a total death-rate from all forms of 0·84. Comparing these rates with Leeds, it will be noted that the Leeds rates were higher by 15·9 per cent. in the case of pulmonary tuberculosis, by 46·7 per cent. in non-pulmonary, and 21·4 per cent. in all forms of the disease.

With reference to the death-rate from pulmonary tuberculosis it will be noticed on referring to the table on page 40 that among the large towns of England and Wales, Leeds occupied sixth place, the towns with lower rates being Sheffield, Bristol, Bradford, Nottingham and Hull, and with higher, Liverpool, Manchester, Newcastle, West Ham, Stoke-on-Trent, Birmingham and London.

Death-rates in Wards.—The wards with the highest death-rates from pulmonary tuberculosis were Richmond Hill (1·43), Osmondthorpe (1·29), West Hunslet (1·16) and Westfield (1·12), whilst those with the lowest were Potternewton (0·31), Roundhay (0·39), Upper Armley (0·41) and Cross Gates and Templenewsam (0·41).

The tables on pages 102 and 100 give the analysis of the deaths in the various wards and age groups.

Occupational Incidence and Mortality.—For the occupation of persons notified during the year as suffering from tuberculosis of all forms and those dying from the disease see page 107.

Institutional Accommodation for Tuberculosis.—Cases of pulmonary tuberculosis requiring institutional treatment are sent to one or other of the two sanatoria provided by the city, Killingbeck or Gateforth. The former has 220 beds, of which an average of 199 were occupied by pulmonary cases during the year, whilst the latter has 50 beds devoted to the treatment of adult pulmonary and non-pulmonary cases as they arise, of which an average of 47 was occupied during the year.

Attention has been called in these pages on many occasions to the decrepit and unsatisfactory condition of the women's wards at Old Killingbeck. Though kept in repair, the cost of doing so in recent years has been heavy, besides which they are so much out-of-

date in every respect that they have long ago ceased to give an adequate return for the money expended on them. I am glad to be able to report that proposals are now afoot to demolish them and to erect new and up-to-date wards in their place. To this end plans are in process of preparation and I hope to be in a position to state in my next report that the buildings are completed.

Early pulmonary tuberculosis in children is treated in the children's sanatorium at "The Hollies" which possesses 40 beds and of which an average of 38 were occupied during the year.

Surgical cases of tuberculosis are treated at The Marguerite Home, Thorp Arch, and the Lord Mayor Treloar's Hospital, Alton, Hampshire. The number of beds reserved for these cases in the former is 35 and in the latter a varying number averaging twelve during the year 1932. In cases of need the Corporation have also a call on a certain number of beds at Shropshire Orthopædic Hospital, Oswestry and Liverpool Open-Air Hospital for Children, Leasowe.

In April arrangements were made with the Public Assistance Committee whereby cases of tuberculosis (pulmonary and non-pulmonary) requiring operative treatment could be admitted to St. James's Hospital.

For further details with respect to institutional treatment see pages 117, 119 and 123.

Public Health Act, 1925, Section 62.—No action was taken under this section during the year.

The housing conditions of 711 of the 736 cases of tuberculosis (all forms) notified, are shown in the table subtended :—

Rooms in house.	Through house.	Percentage of total throughs.	Back-to-back house.	Percentage of total back-to-back.	Percentage of total cases
1 room	2	0·7	2	0·4	0·6
2 rooms	9	3·3	95	21·6	14·6
3 rooms	30	11·1	178	40·4	29·2
4 rooms	71	26·2	116	26·4	26·3
5 rooms	70	25·8	28	6·4	13·8
6 rooms	52	19·2	20	4·6	10·1
7 or more rooms	37	13·7	1	0·2	5·4
Total	271	100·0	440	100·0	100·0

In addition to the 271 through houses and 440 back-to-back houses, there were 25 cases notified from common lodging houses, etc., making a total of 736 cases of all forms of tuberculosis notified during the year.

The sub-joined table indicates the type of house occupied by 179 persons who were notified during 1932 as suffering from tuberculosis of all forms and who died during the year :—

Rooms in house.	Through house.	Percentage of total throughs.	Back-to-back house.	Percentage of total back-to-back.	Percentage of total deaths.
1 room .. ..	..	..	..	..	..
2 rooms	1	1·6	19	18·5	12·0
3 rooms	5	8·0	44	42·7	29·5
4 rooms	14	22·2	26	25·2	24·1
5 rooms	18	28·6	9	8·7	16·3
6 rooms	13	20·6	5	4·9	10·9
7 or more rooms	12	19·0	..	..	7·2
Total	63	100·0	103	100·0	100·0

In addition to 63 through houses and 103 back-to-back houses, there were 13 deaths in which the home address was given as common lodging houses, etc.

DEATHS FROM ALL FORMS OF TUBERCULOSIS IN 1932 WITH YEAR
OF NOTIFICATION.

Year of Notification.			No. dying in 1932.	Percentage of total deaths.
1913	..	..	1	0.2
1914	..	..	1	0.2
1915	..	..	1	0.2
1916	..	..	—	—
1917	..	..	1	0.2
1918	..	..	2	0.4
1919	..	..	4	0.8
1920	..	..	5	1.0
1921	..	..	1	0.2
1922	..	..	6	1.2
1923	..	..	2	0.4
1924	..	..	4	0.8
1925	..	..	9	1.8
1926	..	..	12	2.4
1927	..	..	10	2.0
1928	..	..	17	3.5
1929	..	..	22	4.5
1930	..	..	42	8.6
1931	..	..	91	18.5
1932	..	..	180	36.5
Not notified	..		74	15.0
Died outside City			8	1.6
Total	..		493	100.0

NOTIFICATIONS AND DEATHS FROM ALL FORMS OF TUBERCULOSIS
OCCURRING IN 1932 CLASSIFIED ACCORDING TO OCCUPATION.

Occupation.	Notifications.		Deaths.	
	Number.	Percentage of total Notifications.	Number.	Percentage of total deaths.
Textile Workers ..	124	16.8	82	16.7
Leather „ ..	7	1.0	7	1.4
Metal „ ..	42	5.7	33	6.7
Coal „ ..	14	1.9	11	2.2
Stone „ ..	9	1.2	12	2.4
Wood „ ..	18	2.4	11	2.2
Other dusty Trades ..	10	1.4	22	4.5
Printers	11	1.5	6	1.2
Clerks, Typists, etc. ..	47	6.4	24	4.9
House Workers ..	105	14.3	88	17.9
Nurses	3	0.4	1	0.2
Food Trades, etc. ..	13	1.8	9	1.8
Labourers	65	8.8	41	8.3
Out-door Workers ..	45	6.2	39	7.9
Various	44	5.9	28	5.7
School Age	122	16.6	28	5.7
Infants	42	5.7	38	7.7
No Occupation ..	15	2.0	12	2.4
No Trace .. ..	..	..	1	0.2
Total ..	736	100.0	493	100.0

REPORT ON THE WORK OF THE TUBERCULOSIS DISPENSARY AND SANTORIA

BY

NORMAN TATTERSALL, M.D., B.S., *Chief Clinical Tuberculosis Officer.*

General.—Once more it is gratifying to commence this report by drawing attention to a further remarkable fall in the death-rate from tuberculosis, another low record having been achieved. For the first time the total deaths from all forms of the disease have fallen below 500, the death-rate being 1.02 per 1,000 of population compared with 1.08 last year. This year's low figure is due to a reduction in the pulmonary deaths. Up to 1925 the deaths from pulmonary tuberculosis never fell below 511. Since 1926, the 500 level has only once been exceeded and in 1932 it reached the record low figure of 386, representing a death-rate of 0.80, and a 20 per cent. reduction in six years. Fluctuations are bound to occur, especially in "influenza" years, but it is a matter of profound satisfaction that the 400 mark has been passed for the first time.

Deaths from non-pulmonary tuberculosis show a slight increase, but this is more than compensated for by the fall in pulmonary deaths.

Comparison of the age at death from pulmonary tuberculosis in recent years with that of 15 or 20 years ago shows a reduction of total deaths in all age groups, but the fall is much more marked during infancy and in later life than in the young adult. In the 15-25 age group, and especially amongst females, the fall is relatively much less than at other ages. Leeds has not shown the actual increase of female deaths in this age group which has been found in some areas, but there is a relative increase in that there has been no fall at this age period comparable with that at all other ages. Of the female deaths from pulmonary tuberculosis, one in three occurs between the ages of 15 and 25. In males one death in six falls into this age group.

The cause of this excessive mortality in young adult females has been attributed to many factors. Features of the life of the modern young woman have been blamed, especially "slimming," "hiking," and dancing. No doubt there are cases in which one or other of these factors has a direct bearing but it is unwise to single out one element of the problem, and possibly miss the essential

factors which are infection and stress. Infection is universal but varies in degree ; it is stress which makes infection possible and turns it into disease. The most common cause of breakdown is the stress of work in mill, shop and factory coupled in many cases with the cares of early motherhood. Too often the husband is out of work and there are one or more young children. After working all day the wife returns to an evening of housework, and the care of children. Men, even in hard physical work, are not subjected to anything like such a physiological strain as is imposed on young women under these conditions and this must be considered the main factor in the excess mortality of females in this age group.

There are indications at the year-end that the long awaited rebuilding of the female wards at Killingbeck is to be taken in hand during the coming year. The need for this has been amply stressed in previous reports and it is reassuring to feel that before long Leeds will possess at least one tuberculosis unit which is being utilised for the purpose for which it was designed.

Central Tuberculosis Dispensary.—Statistical details of the work of the Dispensary for 1932 appear on pages 110 and 111.

The number of new cases (excluding contacts) referred for an opinion was 1,189, a slight decline on the previous year. Of these, 537 were found to be suffering from tuberculosis, 431 being of the pulmonary type and 106 of the non-pulmonary. The percentage of definite cases (45 per cent.) is the same as in the previous year and closely conforms to the average findings throughout the country.

At the end of the year 53 cases remained under observation with the diagnosis not completed.

Every old case on the dispensary register was thoroughly investigated during the year, the result being a reduction of the total number on the register which now stands at 3,146. Of the cases marked off 578 were considered " recovered " and 225 were cancelled as the original diagnosis was not confirmed.

The number of new non-pulmonary cases is approximately the same as last year. Bone and joint cases showed a slight decrease, whilst abdominal and gland cases were higher than in recent years. The latter groups are more commonly the result of milk infection than the human type of germ, and point to the need of some uniform method of dealing with the city's milk supply.

EXTRACTS FROM THE MINISTRY OF HEALTH ANNUAL RETURN. FORM T/145. (Table A.) FOR THE YEAR ENDED 31st DECEMBER, 1932. SHOWING, UNDER HEADINGS A. AND B., THE STATE OF DIAGNOSIS AT THE END OF THE YEAR.*

A. New Cases examined during the year (excluding contacts).	PULMONARY.				NON-PULMONARY.				TOTAL.			
	Adults.		Children.		Adults.		Children.		Adults.		Children.	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
	243	103	13	12	23	33	27	23	266	196	40	35
Definitely Tuberculous	11	19	17	6
Doubtfully Tuberculous	250	208	83	58
Non-Tuberculous
TOTALS	13	12	23	33	27	23	527	423	140	99
B. New Contacts examined during the year:—												
Definitely Tuberculous	17	18	1	..	2	..	6	5	19	18
Doubtfully Tuberculous	1	4	13	11
Non-Tuberculous	103	194	155	173
TOTALS	17	18	1	..	2	..	110	203	187	202
C. Cases written off Dispensary Register:—												
Cured	56	38	17	19	13	14	244	213	69	52
Diagnosis not confirmed or non-tuberculous (including cancellation of cases notified in error)	425	448	289	287
TOTALS	669	661	358	339
Number of Persons on Dispensary Register:—												
Diagnosis completed	3,064
Diagnosis not completed	82
TOTAL	3,146

* Returns prior to 1931 have shown the diagnosis as at one month from date of first attendance.

PATIENTS (EXCLUDING CONTACTS) FIRST EXAMINED AT CENTRAL TUBERCULOSIS DISPENSARY
FROM JANUARY 1st, 1932 TO DECEMBER 31st, 1932.

PULMONARY TUBERCULOSIS.

	New patients.				Number bacteriologically positive.				Number clinically positive, but not T.B. +.				Number found to be Non-tubercular, lost sight of, etc.				Still under observation.				Number admitted to Sanatoria for treatment or observation.			
	M.	F.	B.	G.	M.	F.	B.	G.	M.	F.	B.	G.	M.	F.	B.	G.	M.	F.	B.	G.	M.	F.	B.	G.
Insured	435	271	..	..	145	77	..	..	228	145	..	..	3	8	..	..	145	68	..	..		
Non-Insured	69	119	113	76	28	30	1	4	11	15	12	8	22	63	83	58	8	11	17	6	22	15	29	18

OTHER FORMS OF TUBERCULOSIS.

	New patients.				Bones and joints.				Abdominal.				Other Organs.				Glands.				Number admitted to Sanatoria.			
	M.	F.	B.	G.	M.	F.	B.	G.	M.	F.	B.	G.	M.	F.	B.	G.	M.	F.	B.	G.	M.	F.	B.	G.
Insured	20	22	..	..	7	4	..	..	3	12	..	..	3	2	..	..	7	4	..	..	2	..	..	..
Non-Insured	3	11	27	23	..	3	4	3	2	4	5	2	1	1	3	1	..	3	15	17	..	..	6	6

Total attendances at Central Tuberculosis Dispensary for—

(a) Light treatment	..	..	6,116
(b) Other special treatments	..	..	2,399
(c) Ordinary clinics:	..	..	7,915
(d) X-ray ..	..	..	1,492

17,922

Total Number of Clinical Examinations (included in attendances)

6,786

Number of cases making the clinical attendances (excluding Light and Special treatments)

3,947

Contacts.—The total of 702 new contacts examined is again a record, being 3·4 per cent. higher than last year. These examinations revealed 48 definite cases—6·8 per cent. of the total—while 29 remained under observation at the end of the year. Detailed findings are set out in the following table.

“CONTACTS” FIRST EXAMINED AT CENTRAL TUBERCULOSIS DISPENSARY FROM JANUARY 1st, 1932, to DECEMBER 31st, 1932.

	New Contacts Examined.	Found Sputum T.B.+	Clinically definite, but sputum negative.	Diagnosed Non- Pulmonary Tubercle.	Found to be Non- Tubercular, lost sight of, etc.	Remaining under observa- tion.	Number admitted to Sanatoria for observation or treatment.
Males	110	5	..	1	103	1	..
Females	203	..	5	..	194	4	..
Boys	187	..	17	2	155	13	19
Girls	202	..	18	..	173	11	16
Total	702	5	40	3	625	29	35

54 cases remaining under observation on December 31st, 1931, were re-examined, with the following results:—

Definitely diagnosed as tubercular 10

Marked off as non-tubercular, died, lost sight
of, etc. 44

Remaining under observation nil.

Total examinations made = 1147 (735 cases).

It becomes increasingly evident that physical examination, especially in young children, will not discover those slight “latent” areas of disease which unless treated are likely to develop into acute disease in adolescence. These can only be detected radiographically. At the same time it is often a matter of the greatest difficulty to decide whether the X-ray findings in many contact children indicate active disease or infection which has already been soundly healed. Only 6·8 per cent. of the contacts examined were definitely diagnosed as tuberculous but many others showed undoubted evidence of infection by calcified nodules seen in X-ray films or by positive skin tests.

The combined findings of clinical examination, X-ray, and skin tests are reviewed in every suspicious case, and where doubt still exists prolonged observation is carried out at the Dispensary or in The Hollies, or Killingbeck. The follow up of these cases in sub-

sequent years indicates that the standards adopted show a slight tendency to over diagnosis rather than the reverse.

Home Visiting by Medical Staff.—Visits by the medical staff to patients in their homes showed a further increase from 821 to 858. Of these 118 were for artificial pneumothorax refills for patients unable to attend the dispensary for this purpose, including several cases where the pneumothorax had been induced in the patient's home either for reasons of urgency or because the patient would not consent to institutional treatment.

Treatment.—Two afternoon sessions each week are now fully occupied with **pneumothorax** and **gold** treatment. No induction of artificial pneumothorax are done at the dispensary, but patients who have had the treatment commenced in Sanatorium or at home attend the dispensary for their refills. Many of them are at work, and a number of the most striking successes have been obtained in young adults who when first seen had acute disease which would have rapidly progressed to a fatal issue but for this treatment.

The total of 661 **pneumothorax refills**, 543 at the dispensary, and 118 at home, is a record figure.

Various **gold salts** have been tried with results similar to those reported last year. It is a valuable adjuvant to pneumothorax treatment and in other cases appears definitely to have checked actively spreading disease and assisted recovery. Over 200 injections of these preparations were given during the year.

Arrangements were completed early in the year with the Public Assistance Committee by which beds were available at St. James's Hospital for cases in which the operations of **Phrenic Evulsion** or **Thoracoplasty** were required. Most of the cases in which such treatment was advised were already in Killingbeck Sanatorium and were transferred to St. James's for a short period whilst these measures were carried out. In a number of cases requiring phrenic evulsion patients were able to go from Killingbeck by ambulance in the morning and return after operation the same day. The arrangement is working smoothly and is dealt with further in the Medical Superintendent's report. In four cases where phrenic evulsion was advised in war pensioners the operation was carried out through the ready co-operation of the Ministry of Pensions Hospital.

The total attendances for **minor surgical measures** was 1,942. This figure includes cases attending for pneumothorax treatment,

plaster and splint applications, aspirations of abscesses, and also a very large number of children in whom a **Mantoux tuberculin test** was carried out.

Artificial Sunlight.—Artificial sunlight treatment was given to 161 patients, including several from Killingbeck Sanatorium—6,116 attendances being recorded. The cases consisted of 73 who remained under treatment from the previous year, and 88 in whom the treatment was commenced for the first time. A total of 67 remained under treatment at the end of the year. The results, as noted in previous years, have been most satisfactory in cases of abdominal and glandular disease. Dr. Jackson has once more done valuable work in dealing with cases of surgical tuberculosis, including the supervision of the sunlight department.

Dental Department.—Regular clinics are held at the Dispensary by Mr. W. L. Fleming who also carries out dental work at Killingbeck Sanatorium and "The Hollies" Sanatorium. A summary of the year's work is given in the following table :—

	Ex- tractions.	Fillings and Scalings.	Dentures.	Total Attendances.
Dispensary	443	21	59	454
Killingbeck	474	70	24	560
*" The Hollies " ..	70	3	..	90

* Done at the Dispensary.

X-Ray Department.—There is no longer any need to labour the value of X-Rays in chest work, it has become the right hand of accurate diagnosis and every year makes this more apparent. By X-Ray examination it is often possible to clear up a doubtful diagnosis or make a negative finding which previously entailed weeks of expensive Sanatorium observation. The cost of films and X-Ray maintenance is thus repaid many times over. In addition to taking 1,992 films, full use has been made of the facilities for screening cases, especially in connection with pneumothorax treatment. The new apparatus at Killingbeck Sanatorium was installed during the early part of the year which has slightly decreased the amount of work falling on this department at the Dispensary. Most of the X-Ray work has been carried out by Dr. Thompson who has continued to produce films of a consistently high standard.

Deaths from Tuberculous Meningitis.—Reference was made in last year's report to the careful enquiries made to ascertain the source of infection in these cases which owing to the nature of their illness are usually first heard of at death. The veterinary department has continued to assist by investigation of the milk supply

of those cases where no contact with an adult source of infection can be proved. In 12 cases where the milk supply was investigated three were definitely found to have been supplied with milk from tuberculous cows.

Health Visitors.—The staff of nine health visitors made 19,421 visits to the homes of tuberculous cases, 765 for completion of environmental reports following notification, 18,283 to dispensary cases, and 373 to other notified cases.

Mortality of Children in Tuberculous Households.—The investigation now being made concerning the health of babies born into tuberculous households during the period 1925-1929 will not be completed until the end of 1934 when a full report will be published.

Clerical.—My thanks again are due to the Panel Doctors who complete the several health insurance forms in accordance with the Ministry of Health Regulations—99 per cent. of the forms issued have been completed and returned. These reports are of considerable assistance in outlining the patient's history and progress, as well as bringing to our notice individual cases requiring help regarding extra nourishment, etc.

The Divisional Medical Officers of the Ministry of Health frequently request our opinion on tuberculous cases referred to them by various approved societies.

Our relationship with other health services in the City continues in the closest co-operation, especially the School Medical Department, to whom more than 1,300 reports were sent.

The Ministry of Pensions' work is now greatly reduced but each case receives the careful attention of both departments. We made 244 reports on tuberculous pensioners during the past year.

The gross total of reports, etc., sent out by letter was 1,626, and by cards 5,734. In addition, 1,186 letters and 11,947 appointment cards were sent to patients.

A review was made during the year of all old notified cases who had never attended the dispensary and the result should make the notification register a fairly true index of all known and traceable cases of tuberculosis now residing in the city.

Care Work.—The valuable work of this voluntary committee has been continued on the same lines as in previous years by helping families to overcome the financial and domestic difficulties so commonly the result of tuberculosis.

The Ministry of Health nourishment grant is administered by this Committee, and through a local charity 42 ex-service men have been helped in various ways.

"The Hollies" Sanatorium School.

PERIOD ENDED 31st DECEMBER, 1932.

(Ministry of Health Form T.145 (D)—modified).

				Remaining Jan. 1st, 1932.	Admitted.	Discharged.	Remaining Dec. 31st, 1932.	
Pulmonary	Boys	{	Under 5	..	..	..	..
			Over 5	..	7	24	21	10
	Girls	{	Under 5	..	..	2	1	1
			Over 5	..	14	24	24	14
Non-Pulmonary	Boys	{	Under 5	..	..	..	..
			Over 5	..	2	5	2	5
	Girls	{	Under 5	..	..	1	..	1
			Over 5	..	1	7	7	1
Observation Cases	Boys	{	Under 5	..	..	2	..	
			Over 5	..	5	20	23	2
	Girls	{	Under 5	..	1	5	4	2
			Over 5	..	6	17	23	..
Totals				36	107	107	36	

ANALYSIS OF CASES DISCHARGED.

DURATION OF RESIDENTIAL TREATMENT.

(Ministry of Health Form T.145 (G)—modified).

		Pulmonary.			Non-Pulmonary.			Total.	
		Disease Quies- cent.	Disease Im- proved.	Disease not Im- proved.	Disease Quies- cent.	Disease Im- proved.	Disease not Im- proved.		
Under 3 months.	Boys	Under 5	..	..	..	..	..	..
		Over 5	I	..	..	..	..	I
	Girls	Under 5	..	..	..	..	..	..
		Over 5	I	I	..	2	..	I	
3-6 months.	Boys	Under 5	..	..	..	..	..	..
		Over 5	10	..	I	I	I	..	
	Girls	Under 5	I	..	..	..	..	..
		Over 5	12	I	I	3	..	..
6-12 months.	Boys	Under 5	..	..	..	..	..	..
		Over 5	8	..	..	..	..	..
	Girls	Under 5	..	..	..	..	..	..
		Over 5	6	..	..	..	..	..
Over 12 months.	Boys	Under 5	..	..	..	..	..	..
		Over 5	I	..	..	..	..	..
	Girls	Under 5	..	..	..	..	..	..
		Over 5	I	I	..	I	..	..
Totals		..	41	3	2	7	I	I	55
Observation and Negative Cases		52
Grand Total		107

In addition a fairly large number of patients have been sent away for varying periods of convalescent treatment, either directly or through other organisations, including approved societies.

The following is a brief summary of the excellent work done :—

Grants of extra nourishment	605
Home helps supplied	31
Periods of convalescence arranged	89
Grants of clothing	212
Denture cases assessed	29
Surgical appliance cases assessed	54
Families helped by supplies of beds and bedding	34
Sick-room requisites loaned	31
Assisted financially	125
Advice, letters to kindred associations, etc. ..	627

“The Hollies” Sanatorium and Open Air School.—The work of this Institution has continued on the same lines as in previous years. There has been comparative freedom from outbreaks of infectious disease, only one case of measles and five of whooping cough having occurred, whilst there has been freedom from diphtheria and scarlet fever which have often caused trouble in other years.

The question of the accurate diagnosis of tuberculosis in childhood is one of very great difficulty, and the cases admitted to The Hollies afford opportunity for close study of this problem. It is remarkable how many children, who present undoubted evidence of tuberculous infection and who come from heavily infected homes, remain entirely free from signs or symptoms whilst under treatment in residential institutions.

Much doubt is expressed nowadays as to whether the infected child develops into the diseased adult. Whether this occurs or not, probably depends more on the stresses of early adult life than on any other factor. There can be no doubt, however, that removal from infectious surroundings and residence in an institution until the surroundings have improved or the source of infection no longer exists, must diminish the degree of infection of the child, and raise resistance to subsequent re-infection. Almost every child admitted to The Hollies is a contact with gross infection, and the

general physical and mental improvement of these children amply justified the existence of the Institution.

School Report.—The new junior teacher commenced duty on January 1st, 1932, and the arrangement of classes into senior and junior groups has been carried on as in former years.

The fine summer of 1932 allowed of a great deal of the children's time being spent in the open air with corresponding benefit.

The figures of attendance are as given by the Head Teacher :—

Number of children admitted to the school register, 94
(boys 40 and girls 54).

Number of school sessions, morning 257, afternoon 257,
total 514.

Total number of attendances 15,733, average attendance
per session, 31.

Average number on the school register, 38.01.

The Hollies is an exceedingly happy institution and it is a pleasure once more to thank the nursing and teaching staff for their unfailing care of the children, and to congratulate them on the success achieved.

The Factory-in-the-Field.—There has been no change in the type of work carried out. The health of the employees has been mainly very good, the amount of time lost (excluding accidents and other causes) being less than for some time past.

At the end of the year the number of employees remaining on the pay roll was three more than at the end of 1931. The following table shows their distribution in the various departments :—

Department.	Tuberculous.	Non-Tuberculous.
Firewood	19	2
Brushmaking	5	2
Printing	4	1
Firelighter	2	..
Other Employees ..	1	6

Tuberculous Employees.—In the course of the year 40 tuberculous patients have been employed for varying periods, and 31 remained on the pay roll at the end of December.

Of the 9 who ceased work, 2 were suspended owing to over-production, 2 were fit for work in the open labour market, 3 were unsuitable, and 2 failed in health.

Loss of Time through Ill-health due to Tuberculosis.—Of the 31 tuberculous employees remaining at the year end, 11 were off

work for varying periods by reason of their disability as shown in the following table :—

	No. Employed.	Worked Full Time.	Absent.
Firewood Department—			
(All males)			
Bundlers	11	6	5 lost 43 days.
Labourers	3	2	1 lost 1 day.
Travellers	5	5	
Brush Department :—			
Males	4	2	2 lost 21 days.
Females	1	—	1 lost 14 days.
Printing Department :—			
Males	1	1	
Females	3	2	1 lost 4 days.
Firelighter Department :—			
Females	2	2	
Gardener—Male ..	1	—	1 lost 2 days.

The average time lost per head amongst the tuberculous workers was 2·74 days in the year, which compares very favourably with just over 5 days for 1931.

Departmentally the days lost per head were :—Firewood 2·3, Brushmaking 7, Printing 1, and Firelighting Nil.

SANATORIA.

Killingbeck Sanatorium.—The Medical Superintendent Dr. W. S. Gilmour, writes :—

The accommodation remains the same viz., 220 beds, allocated as follows :—Male 88, Female 78, Children 54. The total number of cases treated during the year was 655, comprising 289 males, 233 females and 133 children, as compared with 721 for the previous year, comprising 327 males, 252 females, and 142 children. Of the 655 cases treated during the year 35 were non-pulmonary cases, divided as follows :—9 males, 6 females and 20 children. The average percentage of bed cases was 57·84.

The average length of stay of patients was :—non-pulmonary 64 weeks, and pulmonary cases 23 weeks.

Patients to the number of 560 were examined by the Dental Surgeon during the year and 368 received treatment.

X-Ray photographs taken at Killingbeck since April 6th numbered 337 in addition to 79 screenings. Prior to that date 56 patients undergoing treatment at Killingbeck were examined by X-Ray at the Tuberculosis Dispensary.

Twelve patients completed 300 attendances for ultra-violet light treatment at the Tuberculosis Dispensary.

OTHER WORK DONE.

Pneumothorax and Air Replacement, 61 cases, 613 refills.

Gold cases 86. Number of injections, 830.

Lipiodol 3 cases.

Cystoscopy 1 case.

Operations other than Phrenic Evulsion 4.

Examinations of sputa, pus, etc., at Leeds Medical School, 21.

Sputum examinations at Killingbeck, 765.

The average length of stay of pulmonary cases has increased from 18 to 23 weeks. This is very satisfactory. As was pointed out in last year's report a period of four months is hardly long enough, and it is hoped that the patients will continue to be educated up to the realisation that whatever special treatment they may receive a reasonably long stay in Sanatorium is essential.

Treatment has gone along on the same lines as last year. Treatment with Gold in particular has had wider scope and the results are so encouraging that its continuance is regarded as essential.

Operative Treatment.—The arrangements made with St. James's Hospital for special surgical treatment for pulmonary disease and for general operations has offered great facilities. From a special point of view it has made possible the complete application of the various methods of collapse treatment. A tradition is gradually being built up amongst the patients that surgical procedures are possible in lung disease and that in selected cases good results can be obtained. Removal of the phrenic nerve has been carried out in 15 cases and it is to be expected that this number will increase. The staff of St. James's Hospital have done everything in their power to make the arrangements run smoothly.

Equipment.—An X-Ray plant was installed in March. Fortunately structural alterations were not necessary, two rooms in Ward K.9 being well adapted for housing the apparatus. That it has been put to good use will be seen by the number of X-Rays taken (337 films and 79 screenings), as compared with 180 films in the previous year when the patients had to attend the Tuberculosis Dispensary for X-Ray examination.

Laundry.—An up-to-date twin garment press has been installed and has put the equipment on the ironing side in a position to cope with the increased amount of work. The laundry of Killingbeck,

"The Hollies," and Gateforth Sanatoria is dealt with and the number of articles handled has increased by 30 per cent. in recent years. Sufficient equipment to deal with this number must be maintained; any failure to do so would cause serious disorganisation in the institutions named. The washing machines are over-worked and are becoming obsolete, and it is hoped that in the next financial year one or more will be replaced by modern machines.

Personnel.—There have been considerable changes in the staff during the year. Miss E. E. Smeeton, the Matron, was obliged to retire owing to ill-health and Miss R. M. Garner was appointed to fill the vacancy. For 20 years Miss Smeeton had spent all her energies in devoted service to the Sanatorium for which the community owes her a deep debt of gratitude.

Dr. E. Ward, Assistant Medical Officer, left to take up an appointment in Lancashire, and Dr. J. F. Galpine was appointed to fill the vacancy.

Miss B. N. Parker, Assistant Matron, resigned, and Miss L. Clegg was appointed to fill the vacancy.

School Report.—The School has been open 510 times during the year. The average number of children attending school, day or half-day, was 46. This number has increased from 32 in 1931 and the number of attendances from 16,196 in 1931 to 19,103 in 1932. This is largely the result of the fact that during the year cases of non-pulmonary tuberculosis who had remained in bed have been admitted to hospitals elsewhere, and their places have been largely taken by children suffering from pulmonary tuberculosis who are usually well enough to be up and to attend school. Miss K. McClare resigned the post of Assistant Teacher and Miss M. D. Okely was appointed in her stead. Dr. M. Bywaters, of the Board of Education, visited the school in November.

Acknowledgments.—Thanks are due to the concert parties who entertained the patients throughout the winter months and to the Rev. Edmund Beabey, A.K.C., Hon. Chaplain, for his assistance in this matter. Thanks are also due to the many friends who made gifts for the patients' comfort at Christmas. I wish to thank the staff of Killingbeck for their loyalty during a difficult year. The staffs of the Health Department and the Tuberculosis Dispensary have again helped us in every way possible.

Killingbeck Sanatorium.

GRADE OF EXERCISE ATTAINED BY ADULT CASES.

					Males.	Females.	Total.
No exercise	..	..	..	..	15	16	31
Walking	..	..	..	..	21	60	81
Work	{ Grade A.*	..	..	..	19	19	38
	{ Grade B.†	..	..	..	12	..	12
	{ Grade C.‡	..	..	..	32	..	32
Treatment not completed	..	..	..	..	24	28	52
Total					123	123	246

* Light work in wards and garden, or vocational.

† Slightly heavier than "A."

‡ Moderately heavy work in wards and garden.

Gateforth Sanatorium.—The Resident Medical Officer, Dr. A. C. Meek, writes :—

The tables on page 124 show the number and classification of patients discharged during the year.

In 1932 the accommodation was increased by four beds, the available number of beds being now 54.

The work of the Sanatorium was carried out on the lines of previous years, walking exercise and graduated labour being employed in the curative process, supplemented in a few suitable cases by the operation of artificial pneumothorax.

Work on the grounds and buildings begun during the preceding year was continued throughout 1932, and though much progress was made, a great deal remains to be accomplished, especially in the provision of adequate poultry shelters. The help of the patients in effecting many of the improvements has been invaluable.

During the year the drainage and sanitary system which, owing to age had become obsolete and in parts defective, was overhauled and modernised and at the same time the bathing facilities for patients in the institution were improved.

Eggs and vegetables valued at £183, were produced and used in the institution, and £156 was realised by the sale of eggs, poultry and other produce.

Gateforth Sanatorium (Males only).
PERIOD ENDED 31ST DECEMBER, 1932.
 (Ministry of Health Form T.145 (D) modified).

	Remaining Jan. 1st, 1932.	Admitted.	Dis- charged.	Died.	Remaining Dec. 31st, 1932.
Pulmonary ..	39	87	83	..	43
Non-Pulmonary ..	1	3	2	..	2
Observation Cases..	4	10	13	..	1
Totals	44	100	98	..	46

ANALYSIS OF CASES DISCHARGED.
DURATION OF RESIDENTIAL TREATMENT.
 (Ministry of Health Form T.145 (G)—modified).

PULMONARY T.B. DISEASE.							NON-PULMONARY T.B. DISEASES.			Total	
	T.B. Minus.			T.B. Plus.			Quies- cent.	Im- proved.	Not Im- proved.		
	Quies- cent.	Im- proved.	Not Im- proved.	Quies- cent.	Im- proved.	Not Im- proved.					
Under 3 mths.	..	21	3	..	10	3	..	..	2	39
3-6 months ..	3	8	1	..	14	3	..	..	..	29
6-12 months..	1	5	..	..	2	4	..	..	..	12
Over 12 mths.	1	..	..	1	1	2	..	..	..	5
Total ..	5	34	4	1	27	12	..	..	2	85
Observation and Negative Cases											13
Grand Total											98

**GRADE OF EXERCISE ATTAINED ON DISCHARGE BY QUIESCENT
AND IMPROVED CASES.**

Cases who completed treatment. Grade.						Treatment not completed.	Total.
1	2	3	4	5	6		
13	4	6	7	2	15	38	85

NOTE.—Patients take walking exercise until 2 hours per day are done without symptoms. Six grades of manual work are then carried out, the last grade involving 6 hours normal work without any rest period.

Maternity and Child Welfare.

MATERNITY AND CHILD WELFARE.

The outstanding features of the year in this section of public health work in the city was the decline in the maternal death-rate and the increase in the infant mortality rate.

The former has been a source of encouragement whereas the latter has tended rather in the opposite direction. I am more than ever convinced that if more use could be made of the ante-natal clinics and if more attention could be paid by doctors and midwives, and not least by the mothers themselves, to ante-natal hygiene and the preparation for confinement, both rates could be very materially reduced. I have said both rates because if one analyses the figures of infant death, one finds that no less than 40 per cent. of the deaths of babies under one year of age take place in the first month. Deaths at such an early stage in existence as the first week, or even the first month, are generally speaking, not preventable by any measures which can be taken after birth. The only hope of saving the lives of infants who die at so young an age is by care and, if necessary, treatment of the mother during pregnancy. As is pointed out by Dr. Gladys Russell in a succeeding paragraph, this care is particularly necessary at the present time when, owing to the continued industrial distress and unemployment, the risk of mothers having to go short of food and other necessities is very real.

Of the causes of infant death in the neo-natal period, that is during the first month, the principal is prematurity. This is a cause of the ill-defined variety, or one for which no adequate explanation can be offered; but this much is certain, that it is a cause which can only be removed by proper supervision of the mother after conception and while the child is in process of formation and growth within her body. Such supervision is available to every mother, either from her own doctor or midwife, or through the agency of the ante-natal clinics which have been established all over the city.

In certain quarters attempts to procure abortion have been blamed for this high rate of prematurity, as well as for many of the maternal deaths, and while undoubtedly there is some justification for this statement, the evidence available in support of it is not so conclusive as it is sometimes made out to be.

Statistics.—The number of children under one year of age who died in 1932 was 617 (males 361 and 256 females) as compared with 552 (males 313 and females 239) for 1931. The infant mortality

rate was 88 as compared with 76 for the previous year and an average of 80 for the previous five years.

Compared with the other large towns in England and Wales, Leeds had the highest infant mortality rate with the exception of Liverpool.

The rate for England and Wales was 65 or 26.1 per cent. lower than the rate for Leeds.

Causes of Death.—The principal causes contributing to the infant death-rate in order of numerical importance were premature birth, pneumonia, diarrhoea and enteritis and congenital malformations. As compared with the previous year the main increases to be recorded were diarrhoea and enteritis (33) and premature birth (14). An examination of the list of causes of death given on page 135 discloses the fact that 156 or 25.3 per cent. of the total deaths of children under one year were due to the respiratory group of diseases—pneumonia, bronchitis, whooping cough and influenza. Last year the number dying from this group of diseases was 147 or 26.6 per cent. of the total deaths and the average for the previous five years was 145 or 24.1 per cent.

Prematurity was the most important single cause of death during the year. The number of deaths attributed to it was 128 or 20.7 per cent. of the total deaths under one year as compared with 114 or 20.7 per cent. for the previous year.

The following table shows the number of deaths from prematurity and the death-rates per thousand births for the years 1922-1932.

Year.	Births.	Deaths from prematurity.	Death-rate per 1,000 births.
1922	9,253	181	19.6
1923	8,684	159	18.3
1924	8,558	144	16.8
1925	8,180	146	17.8
1926	8,065	149	18.5
1927	7,790	146	18.7
1928	7,665	169	22.0
1929	7,426	173	23.3
1930	7,568	152	20.1
1931	7,219	114	15.8
1932	7,004	128	18.3

The average death-rate per thousand births for the ten years, 1922-1931, was 19.1.

INFANT MORTALITY.

Year.	Deaths under one year.	RATE PER 1,000 BIRTHS.	
		LEEDS.	England and Wales.
1890	2,128	173	151
1891	2,216	177	149
1892	2,114	168	148
1893	2,542	206	159
1894	1,945	156	137
1895	2,384	191	161
1896	2,120	169	148
1897	2,454	190	156
1898	2,372	183	160
1899	2,222	172	163
1900	2,397	183	154
1901	2,429	188	151
1902	2,113	160	133
1903	1,992	153	132
1904	2,207	176	145
1905	1,875	152	128
1906	1,837	152	132
1907	1,533	131	118
1908	1,654	138	120
1909	1,350	123	109
1910	1,446	133	105
1911	1,679	159	130
1912	1,051	102	95
1913	1,469	135	108
1914	1,324	124	105
1915	1,253	127	110
1916	1,216	129	91
1917	1,023	135	96
1918	984	133	97
1919	899	119	89
1920	1,232	110	80
1921	997	98	83
1922	935	101	77
1923	773	89	69
1924	921	108	75
1925	748	91	75
1926	748	93	70
1927	629	81	70
1928	606	79	65
1929	722	97	74
1930	512	68	60
1931	552	76	66
1932	617	88	65

INFANT MORTALITY PER 1000 BIRTHS, 1890 - 1932.



INFANTILE MORTALITY DURING THE ELEVEN YEARS 1922-1932 AT DIFFERENT PERIODS OF
THE FIRST YEAR OF LIFE.

YEAR.	Births in year.	Under one week.		Under one month.		One and under three months.		Three and under six months.		Six and under nine months.		Nine and under twelve months.		Under one year.	
		Deaths.	Rate.	Deaths.	Rate.	Deaths.	Rate.	Deaths.	Rate.	Deaths.	Rate.	Deaths.	Rate.	Deaths.	Rate.
1922	..	206	22.2	401	43.3	159	17.2	125	13.5	127	13.7	123	13.3	935	101
1923	..	204	23.5	363	41.8	110	12.7	125	14.4	92	10.6	83	9.6	773	89
1924	..	185	21.6	331	38.7	156	18.2	155	18.1	150	17.5	129	15.1	921	108
1925	..	184	22.5	309	37.8	141	17.2	119	14.5	88	10.8	91	11.1	748	91
1926	..	187	23.2	312	38.7	134	16.6	118	14.6	96	11.9	88	10.9	748	93
1927	..	170	21.8	274	35.2	103	13.2	87	11.2	84	10.8	81	10.4	629	81
1928	..	201	26.2	286	37.3	102	13.3	94	12.3	72	9.4	52	6.8	606	79
1929	..	210	28.3	314	42.3	111	14.9	107	14.4	108	14.5	82	11.0	722	97
1930	..	208	27.5	291	38.5	74	9.8	57	7.5	49	6.5	41	5.4	512	68
1931	..	172	23.8	233	32.3	92	12.7	86	11.9	80	11.1	61	8.4	552	76
1932	..	189	27.0	255	36.4	110	15.7	100	14.3	85	12.1	67	9.6	617	88

Pneumonia (all forms) was the second most important single cause of death. There were 106 deaths, or 17·2 per cent., of the total deaths under one year from this disease, as compared with 104, or 18·8 per cent. for the previous year, and an average of 108 or 15·1 per cent. for the previous decade.

The deaths from diarrhoea and enteritis under one year of age numbered 94 as compared with 61 for the previous year and an average of 87 for the previous ten years.

Deaths in Age Groups.—Of the total (617) infant deaths 104, or 16·9 per cent., took place in the first day of life; 189, or 30·6 per cent., in the first week; 255, or 41·3 per cent., in the first month; 110, or 17·8 per cent., between one and three months; 100, or 16·2 per cent., between three and six months; 85, or 13·8 per cent., between six and nine months; and 67, or 10·9 per cent., between nine and twelve months.

The percentage changes in the infant death-rate per 1,000 births in 1932 as compared with the average of the previous ten years are as follows:—

Under 1 week, increase	12·5%	3-6 months, increase ..	7·5%
Under 1 month decrease	5·9%	6-9 ,, ,, ..	2·5%
1-3 months increase	6·8%	9-12 ,, decrease ..	6·8%
Whole year decrease, 1·1%			

It is interesting to note the changes which have taken place at the various age periods of infancy since the quinquennium 1905-1909. These are set out in the table on page 134. The quinquennial average has been taken in order to make a better comparison.

Neo-Natal Death-rate.—The number of deaths of infants occurring in the first month of life was 255, or 22 more than in the previous year, and the neo-natal death-rate was 36·4.

Of the total deaths under one year 41·3 per cent. occurred in the first month as compared with 42·2 per cent. for the previous year, and of the deaths in the first month, 40·8 per cent. occurred in the first day, 74·1 per cent. in the first week, and 83·5 per cent. in the first two weeks.

The deaths in the first month were largely due to prematurity and other congenital defects.

Illegitimate Death-rate.—Of the 370 illegitimate births, 52, or 14·1 per cent., died before reaching the age of one year, which is equal to an infantile mortality rate of 141. This is an increase of 10 per thousand as compared with 1931 and a decrease of 1 as compared with 1930.

Death-rate in Quarters.—The infant mortality rate for the four quarters of the year is given in the accompanying table.

	I.	II.	III.	IV.	Year.
1922	119	106	77	101	101
1923	114	74	86	82	89
1924	171	83	63	109	108
1925	84	62	100	126	91
1926	120	78	75	100	93
1927	104	70	66	83	81
1928	84	60	77	99	79
1929	142	84	79	84	97
1930	80	62	54	76	68
1931	105	62	57	83	76
1932	103	77	74	100	88

Maternal Mortality.—The number of mothers who lost their lives in childbirth during the year was 21, a decrease of 18 on the figure for 1931. The maternal mortality rate per thousand live births was 3.00 as compared with 5.40 for the previous year and an average of 4.73 for the previous five years. If the maternal mortality rate is calculated on the total number of births (live and still) the rate for the year is reduced to 2.86.

The following table shows the maternal mortality rate per thousand live births and per thousand total (live and still) births for the last four years.

MATERNAL MORTALITY.

Year.	No. of deaths.	Rate per 1,000 live births.	Rate per 1,000 total (live and still) births.
1929	33	4.44	4.23
1930	32	4.23	4.05
1931	39	5.40	5.14
1932	21	3.00	2.86

The death-rate of unmarried mothers per thousand illegitimate births was 8.11 as compared with a rate of 2.71 for married mothers. Last year the death-rate of unmarried mothers was 5.59 and that of married mothers 5.39.

Further details on this subject will be found on page 146.

INFANTILE MORTALITY IN WARDS AT DIFFERENT PERIODS OF THE FIRST YEAR OF LIFE, CALENDAR YEAR, 1932.

Ward.	Births in year.	Under one day.		Under one week.		Under one month.		One and under three months.		Three and under six months.		Six and under nine months.		Nine and under twelve months.		Under one year.	
		Deaths.	Rate.	Deaths.	Rate.	Deaths.	Rate.	Deaths.	Rate.	Deaths.	Rate.	Deaths.	Rate.	Deaths.	Rate.	Deaths.	Rate.
Mill Hill and South	282	7	24.8	10	35.5	11	39.0	8	28.4	5	17.7	4	14.2	3	10.6	31	110
Westfield ..	389	7	18.0	8	20.6	14	36.0	5	12.9	4	10.3	7	18.0	2	5.1	32	82
Blenheim ..	280	5	17.9	10	35.7	10	35.7	9	32.1	9	32.1	3	10.7	6	21.4	37	132
Central ..	359	3	8.4	6	16.7	9	25.1	8	22.3	5	13.9	3	8.4	7	19.5	32	89
Woodhouse ..	274	3	10.9	6	21.9	9	32.8	5	18.2	3	10.9	2	7.3	1	3.6	20	73
North ..	201	4	19.9	5	24.9	5	24.9	2	10.0	5	24.9	2	10.0	..	..	14	70
Far Headingley ..	162	6	37.0	8	49.4	11	67.9	1	6.2	2	12.3	2	12.3	..	..	16	99
Hyde Park ..	149	1	6.7	2	13.4	3	20.1	1	6.7	1	6.7	..	..	2	13.4	7	47
Kirkstall ..	251	5	19.9	9	35.9	11	43.8	3	12.0	1	4.0	2	8.0	..	..	17	68
Burmantofts ..	397	4	10.1	11	27.7	16	40.3	10	25.2	13	32.7	6	15.1	9	22.7	54	136
Harehills ..	235	1	4.3	5	21.3	7	29.8	2	8.5	1	4.3	2	8.5	1	4.3	13	55
Potternewton ..	192	3	15.6	4	20.8	7	36.5	..	..	2	10.4	1	5.2	2	10.4	12	63
Roundhay ..	170	6	35.3	8	47.1	8	47.1	2	11.8	1	5.9	1	5.9	1	5.9	13	76
Cross Gates and Templenewsam	162	2	12.3	5	30.9	5	30.9	2	12.3	..	..	..	..	1	6.2	8	49
Richmond Hill ..	507	8	15.8	16	31.6	21	41.4	10	19.7	12	23.7	13	25.6	8	15.8	64	126
Osmondthorpe ..	367	5	13.6	7	19.1	13	35.4	6	16.3	4	10.9	3	8.2	3	8.2	29	79
East Hunslet ..	282	2	7.1	6	21.3	11	39.0	6	21.3	6	21.3	5	17.7	1	3.5	29	103
Hunslet Carr and Middleton	367	2	5.4	9	24.5	12	32.7	4	10.9	9	24.5	6	16.3	4	10.9	35	95
West Hunslet ..	245	3	12.2	4	16.3	7	28.6	2	8.2	1	4.1	5	20.4	1	4.1	16	65
Beeston ..	170	5	29.4	6	35.3	7	41.2	2	11.8	3	17.6	..	..	..	..	12	71
Holbeck (South)	177	1	5.6	3	16.9	7	39.5	2	11.3	..	..	3	16.9	1	5.6	13	73
Holbeck (North)	343	7	20.4	9	26.2	11	32.1	4	11.7	7	20.4	8	23.3	7	20.4	37	108
Armley and New Wortley ..	296	4	13.5	9	30.4	10	33.8	5	16.9	..	..	4	13.5	3	10.1	22	74
Upper Armley ..	227	1	4.4	6	26.4	7	30.8	3	13.2	1	4.4	1	4.4	1	4.4	13	57
Bramley ..	255	3	11.8	6	23.5	10	39.2	3	11.8	2	7.8	1	3.9	3	11.8	19	75
Farnley and Wortley ..	265	6	22.6	11	41.5	13	49.1	5	18.9	3	11.3	1	3.8	..	..	22	83
City ..	7,004	104	14.8	189	27.0	255	36.4	110	15.7	100	14.3	85	12.1	67	9.6	617	88

BIRTHS AND DEATHS UNDER ONE YEAR WITH RATES.—CALENDAR YEAR 1932.

W.A.R.D.	Total Births (net).	Birth rate per 1,000 population.	No. of legitimate births.	No. of illegitimate births.	Total deaths under one year (net).	Death rate per 1,000 births.	No. of legitimate deaths under one year.	Legitimate death rate per 1,000 legitimate births.	No. of illegitimate deaths under one year.	Illegitimate death rate per 1,000 illegitimate births.
Mill Hill and South Westfield ..	282	17.87	259	23	31	110	31	120	..	..
Blenheim ..	389	19.86	362	27	32	82	28	77	4	148
Central ..	280	12.20	238	42	37	132	28	118	9	214
Woodhouse ..	359	17.03	323	36	32	89	29	90	3	83
North ..	274	14.60	260	14	14	73	18	69	2	143
Far Headingley ..	201	12.94	194	7	14	70	14	72	..	..
Hyde Park ..	162	8.86	153	9	16	99	13	85	3	333
Kirkstall ..	149	9.02	140	9	7	47	6	43	1	111
Burmantofts ..	251	12.78	237	14	17	68	16	68	1	71
Harehills ..	397	17.17	383	14	54	136	49	128	5	357
Potternewton ..	235	11.89	227	8	13	55	12	53	1	125
Roundhay ..	192	9.76	179	13	12	63	10	56	2	154
Cross Gates and Templenewsam	170	11.18	164	6	13	76	13	79	..	..
Richmond Hill ..	162	11.17	154	8	8	49	7	45	1	125
Osmondthorpe ..	597	20.74	477	30	64	126	57	119	7	233
East Hunslet ..	367	16.87	357	10	29	79	26	73	3	300
Hunslet Carr and Middleton..	282	15.26	265	17	29	103	28	106	1	59
West Hunslet ..	367	18.26	359	8	35	95	33	92	2	250
Beeston ..	245	13.54	240	5	16	65	16	67	..	..
Holbeck (South)	170	11.15	163	7	12	71	11	67	1	143
Holbeck (North)	177	12.33	173	4	13	73	12	69	1	250
Armley and New Wortley..	343	18.67	322	21	37	108	36	112	1	48
Upper Armley ..	206	14.60	285	11	22	74	20	70	2	182
Bramley ..	227	13.34	214	13	13	57	13	61	..	..
Farnley and Wortley..	255	14.42	250	5	19	75	18	72	1	200
City ..	265	14.19	256	9	22	83	21	82	1	111
	7,004	14.44	6,634	370	617	88	565	85	52	141

PERCENTAGE CHANGES (5 YEAR PERIODS, ALSO YEARS 1930, 1931 AND 1932) IN THE INFANT DEATH-RATE
per 1,000 BIRTHS AS COMPARED WITH THE AVERAGE OF THE FIVE YEARS 1905-1909.

Five year period.	Under one week		Under one month.		One and under three months.		Three and under six months.		Six and under nine months.		Nine and under 12 months.		Under one year.	
	Rate.	Percentage increase or decrease over 5 years period 1903-1909.	Rate.	Percentage increase or decrease over 5 years period 1903-1909.	Rate.	Percentage increase or decrease over 5 years period 1903-1909.	Rate.	Percentage increase or decrease over 5 years period 1903-1909.	Rate.	Percentage increase or decrease over 5 years period 1905-1909.	Rate.	Percentage increase or decrease over 5 years period 1905-1909.	Rate.	Percentage increase or decrease over 5 years period 1905-1909.
1905- 1909	26.2	—	44.3	—	25.5	—	28.0	—	23.0	—	18.6	—	139	—
1910- 1914	26.6	+1.5%	44.1	-0.5%	24.7	-3.1%	23.9	-14.6%	20.1	-12.6%	18.0	-3.2%	131	-5.8%
1915- 1919	26.4	+0.8%	44.4	+0.2%	21.5	-15.7%	25.0	-10.7%	19.7	-14.3%	17.9	-3.8%	129	-7.2%
1920- 1924	23.8	-9.2%	42.3	-4.5%	17.9	-29.8%	16.1	-42.5%	13.2	-42.6%	11.6	-37.6%	101	-27.3%
1925- 1929	24.3	-7.3%	38.2	-13.8%	15.1	-40.8%	13.4	-52.1%	11.5	-50.0%	10.1	-45.7%	88	-36.7%
Year 1930	27.5	+5.0%	38.5	-13.1%	9.8	-61.6%	7.5	-73.2%	6.5	-71.7%	5.4	-71.0%	68	-51.1%
Year 1931	23.8	-9.2%	32.3	-27.1%	12.7	-50.2%	11.9	-57.5%	11.1	-51.7%	8.4	-54.8%	76	-45.3%
Year 1932	27.0	+3.1%	36.4	-17.8%	15.7	-38.4%	14.3	-48.9%	12.1	-47.4%	9.6	-48.4%	88	-36.7%

DEATHS FROM STATED CAUSES UNDER ONE YEAR OF AGE.

Causes of death.	Year 1931.	Year 1932.	Increase or decrease.	Percentage of total deaths under one.
Smallpox .. ..	..	..	..	..
Chickenpox	1	..	- 1	..
Measles	6	17	+ 11	2.8
Scarlet Fever	1	2	+ 1	0.3
Whooping Cough	14	18	+ 4	2.9
Diphtheria .. ..	..	2	+ 2	0.3
Influenza	4	5	+ 1	0.8
Erysipelas	4	4	- +	0.6
Tuberculous Diseases	8	11	+ 3	1.8
Meningitis	6	6	- +	1.0
Convulsions	16	19	+ 3	3.1
Bronchitis	22	23	+ 1	3.7
Pneumonia (all forms)	104	106	+ 2	17.2
Other diseases of Respiratory Organs	3	4	+ 1	0.6
Diarrhoea and Enteritis	61	94	+ 33	15.2
Gastritis	5	6	+ 1	1.0
Syphilis	6	7	+ 1	1.1
Rickets	2	1	- 1	0.2
Suffocation, including overlying	14	10	- 4	1.6
Injury at birth	20	16	- 4	2.6
Atelectasis	10	21	+ 11	3.4
Congenital Malformations	46	31	- 15	5.0
Premature birth	114	128	+ 14	20.7
Atrophy, Debility, and Marasmus	26	22	- 4	3.6
Other Causes	59	64	+ 5	10.4
Totals	552	617	+ 65	100.0

MATERNITY AND CHILD WELFARE SERVICES INCLUDING SUPERVISION OF MIDWIVES

BY

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Number of Midwives.—The total number of midwives on the register at December 31st, 1931 was 89; 30 new names were added during the year; 14 did not renew their notification of intention to practise; 20 left the district and one died, leaving a total on the register at December 31st, 1932, of 84. The actual number of midwives who practised in the area during the year was 83, of whom 42 were attached to Nursing Homes, Associations, etc. Eighty (or 96·4 per cent.) of those were trained and three (or 3·6 per cent.) untrained. The number of births attended by midwives was 2,314 or 31·4 per cent. of the total births registered as compared with 2,535 or 33·5 per cent., during the previous year.

The following table gives an analysis of the cases attended by midwives :—

TRAINED.			UNTRAINED.	
80 midwives.			3 midwives.	
Total cases attended .. 2,265			Total cases attended .. 49	
Average per midwife 28 cases.			Average per midwife 16 cases.	
No. of Cases.	Practising on their own account.	Attached to Nursing Homes or Associations.	No. of Cases.	Practising on their own account.
Over 200	..	..	Over 200	..
" 150	2	..	" 150	..
" 100	3	1	" 100	..
" 75	1	2	" 75	..
" 50	6	2	" 50	..
" 25	7	4	" 25	1
" 10	4	8	" 10	..
" 5	4	12	" 5	2
Under 5	11	13	Under 5	..

Twenty trained midwives (18 attached to institutions, nursing homes or Associations) and 2 untrained took no cases during the year.

Inspection of Midwives.—The total number of inspections made during the year was 288, of which 211 were routine, and 77 special

visits. Fifty-nine midwives were interviewed in connection with breaches of the rules of the Central Midwives Board, and other minor misdemeanours; eight were reported to the Senior Medical Officer for Maternity and Child Welfare, and five were interviewed by her.

One was summoned to appear before the Maternity and Child Welfare Committee for negligence and breaches of the rules of the Central Midwives Board, and she was sent up to the Central Midwives Board for trial. She was found guilty by the Board, but sentence was postponed for a year pending the submission of quarterly reports by the Local Supervising Authority on her conduct and methods of practice.

Advising Medical Help.—Notifications of having advised medical assistance were received in 983 cases, which may be classified as follows:—

Illness during pregnancy or abortion	..	..	..	57
Malpresentation	..	..	..	44
Delayed or obstructed labour	..	..	..	190
Ruptured perineum..	..	..	..	202
Retained membrane or placenta	..	..	..	23
Hæmorrhage	..	..	..	53
Convulsions, eclampsia	..	..	..	2
Puerperal rise of temperature	..	..	..	52
Illness of mother during puerperium	..	..	..	67
Illness of child	..	..	..	102
Infants—discharging eyes	..	..	..	68
Artificial feeding	..	..	..	28
Death of infant under ten days	..	..	..	25
Still-births	..	..	..	53
Suspected infectious disease	..	..	..	17
Maternal deaths	..	..	..	11

Midwives' Emergencies.—During the year 608 claims were made by medical practitioners in the city for attendance on emergencies of labour under Section 14 of the Midwives' Act, 1918. Of these 14 were paid direct by the parent, the remainder 594 being met in whole, or in part, by the Local Authority, at a total cost of £607 11s. 3d.

Accouchement Sets.—During the year, 219 sterilized accouchement sets were sold to the mothers, through the Welcomes, midwives and maternity homes. In this connection a circular received from the Ministry of Health during the year called attention to the possibility of disease being conveyed by imperfectly sterilized accouchement sets and urging Local Authorities to take steps to ensure that sets distributed by them were sterile. Investigations into the quality of the sets distributed by this department were reassuring on this point.

Nursing in the Home.—The arrangement with the Leeds District Nursing Association for the nursing in their own homes of cases of puerperal fever, puerperal pyrexia, ophthalmia neonatorum, pemphigus, measles and pneumonia, remained in operation. A total of 78 cases were provided for in this way during the year.

Puerperal Fever.—There were 28 cases of this disease notified during 1932, of which 21 recovered and 2 died. In 5 cases, the result is not known, as the patients came from outside the city. Four of the cases followed abortion—in the remainder, the labour was at full term. The number of cases of puerperal fever occurring in doctors' practices was 6, in midwives 7, and in institutions 15. There were 43 cases of puerperal pyrexia notified, and of these 3 died, 2 from puerperal fever and 1 from other causes.

The Inspector of Midwives paid a total of 72 visits for the purpose of investigating rises of temperature in the puerperium. Arrangements were made for the district nurses to take over the nursing of 5 cases.

Eight midwives were disinfected after contact with cases of puerperal fever, and 11 after puerperal pyrexia.

Ophthalmia Neonatorum.—During the year, 46 cases of ophthalmia neonatorum were notified, 10 occurred in the practice of doctors, 8 of whom had handy-women in attendance; 24 occurred in the practice of midwives; and 12 in institutions. Of the total cases, 26 were treated at home, and 20 in hospital. Twenty-one cases of ophthalmia neonatorum, and 8 cases of discharging eyes were referred to the District Nursing Association for home treatment. As a result of treatment, 45 cases apparently made a

complete recovery ; in the remaining case, the result is not known, as the child came from outside the city.

This subject is further dealt with in the section on Infectious and Other Diseases on page 58.

Pemphigus.—There were 27 cases of pemphigus brought to the notice of the Department during the year. Sixteen of these were midwives cases, of whom one died ; three occurred in the practice of doctors, of whom two died in hospital ; and 8 occurred in Institutions. Home visiting was provided in 8 cases, and 3 were removed to hospital. Two midwives had a group of 4 and 3 cases respectively, and nine midwives had isolated cases of one.

Municipal Midwives.—There were no midwives actually employed by the Health Department, nor was any subsidy given to any practising midwife during the year. However, there continued in operation the arrangement made between the Corporation and the Maternity Hospital, whereby provision is made for the maintenance of district midwives in five districts of the city.

The total number of cases dealt with by the branch midwives was 441, a decrease of 183 on the previous year. Only one midwife (Burmantofts) conducted over 120 cases and was entitled to a bonus.

The cost on the working of all Branches for the year was £420 which is borne by the Corporation under the agreement already referred to.

Compensation to Midwives for Loss of Work.—A midwife can claim compensation for any case lost because of her having been in contact with infection. The number of such claims made during the year was 2 (7 cases) and the cost to the Corporation was £8 13s. 6d. She can also claim for the loss of a case she has sent to an ante-natal clinic, and which, owing to some abnormality has had to be sent into hospital for confinement. The number of these claims was 32 and the cost to the Corporation £32. In addition, there was a claim from a midwife for a case she had referred to a medical practitioner and which was sent, eventually, into the Maternity Hospital. The cost to the Corporation was £1.

Handywomen.—During the year seven handywomen were visited and warned as to limitations of practice, etc. ; five were disinfected after being in contact with cases of puerperal fever and

other infections. One handywoman was taken before the Court of Summary Jurisdiction for an offence against the Midwives' Act. The case was proved but no penalty was inflicted the woman being treated as a first offender. There are too many handywomen practising irregularly as midwives in the city, and a fine or other penalty in this case would have been salutary.

Ante-natal Work.—A total of 2,930 expectant mothers attended the ante-natal clinics during the year, which represents a decrease of 222 on the previous year. Of the total, 2,266 were new, and attended for the first time. The attendances at all the clinics totalled 9,391, as compared with 10,030 for 1931.

ANTE-NATAL CLINICS.

NEW CASES ADMITTED TO REGISTER DURING 1932 AND BY WHOM RECOMMENDED.

Welcome.	Midwife.	Self.	Hospital.	Welcome Dr.	Private Dr.	Health Visitor.	Total.	Percentage sent by Midwife.
Ellerby ..	59	93	1	5	..	6	164	36.0
West Street	22	52	..	..	..	..	74	29.7
Burmantofts	148	59	5	3	..	..	215	68.8
Hunslet ..	151	19	6	2	4	1	183	82.5
University ..	88	42	..	1	..	12	143	61.5
Woodhouse ..	76	48	2	16	2	25	169	45.0
Holbeck ..	90	47	1	4	4	30	176	51.1
Armley ..	5	198	7	..	7	2	219	2.3
Chapelton	56	71	1	..	..	..	128	43.8
St. Nicholas	181	1	17	..	3	6	208	87.0
Bramley ..	2	85	5	2	3	3	100	2.0
New Wortley	58	45	1	1	3	17	125	46.4
Middleton ..	51	14	..	2	..	17	84	60.7
West Hunslet	66	55	6	..	2	1	130	50.8
Cross Gates ..	..	13	..	..	..	2	15	..
Burley ..	55	38	..	2	1	6	102	53.9
Halton ..	5	7	..	..	..	2	14	35.7
Kirkstall ..	11	3	..	..	1	2	17	64.7
TOTAL ..	1,124	890	52	38	30	132	2,266	49.6

Particulars of the work at the ante-natal clinics are set out in the following table.

EXPECTANT MOTHERS ON REGISTER.

Welcome.	No. on register at beginning of year.	Registered during year.	Live Births.		On register end of year.	Total attendance of expectant mothers.
			Full Term.	Premature.		
Ellerby ..	47	164	146	2	51	600
West Street ..	24	74	66	4	24	242
Burmantofts ..	64	215	195	8	54	975
Hunslet ..	49	183	164	9	48	578
University ..	46	143	147	7	30	453
Woodhouse ..	51	169	157	6	34	700
Holbeck ..	48	176	162	9	42	720
Armley ..	64	219	196	7	66	1,239
Chapeltown ..	50	128	113	11	41	462
St. Nicholas ..	54	208	179	11	53	720
Bramley ..	36	100	81	8	35	553
New Wortley ..	33	125	107	6	36	654
Middleton ..	26	84	69	..	32	342
West Hunslet ..	29	130	107	4	37	612
Burley ..	29	102	89	8	28	318
Crossgates ..	11	15	16	2	7	84
Halton ..	3	14	13	..	3	41
Kirkstall ..	..	17	7	..	6	92
Totals ..	664	2,266	2,014	102	627	9,385

Of the 2,930 mothers on the register 38 miscarried and 89 had still births.

In addition to the above 6 expectant mothers paid 6 visits to Meanwood Centre where no ante-natal clinic is held, making a total of 9,391 attendances.

Included in the number of live births are 30 sets of twins.

The mothers attending the ante-natal clinics either come there on their own initiative or are referred by midwives, health visitors, or doctors. The table on page 140 analyses the new cases admitted during 1932 at the different clinics, with particulars as to where the recommendations came from.

The average sent by midwives was 49.6 per cent. as compared with 53.7 per cent. for 1931, and 68.0 per cent. for 1930.

It is disappointing to note that the mothers do not yet realise the importance of being supervised during pregnancy, and are not using to the full, the facilities which are provided for that purpose.

Consultative Ante-natal Clinic at Holbeck.—A consultative ante-natal clinic was established at the Holbeck Infant Welfare Centre at the beginning of 1932 for an experimental period of one year. The object of this was to serve the needs of the population South of the river. There was already a consultative ante-natal clinic at the Maternity Hospital, but there was difficulty in getting mothers to attend there regularly, or even to go there at all, because of the inaccessibility of the Hospital and the somewhat arduous climb from the nearest tram stop to its gates. It was hoped also that the local medical practitioners would take advantage of this clinic and send their patients to it.

The clinic was opened on February 3rd, 1932, and has continued on the afternoons of the first and third Wednesdays of each month since. It is staffed by two of the Maternity Hospital consultants, who attend at alternate sessions.

From inauguration up to December 31st, 1932, fifty-three mothers have been referred to the clinic, and there has been an average attendance of 3 per session. Forty-four of the patients were referred by Welcome doctors, and nine were sent by medical practitioners in the district.

The number attending, especially the number sent by general practitioners, has been disappointing. Despite the fact that the practitioners on the South of the river were all circularised about the establishment of the clinic and its objects, they have not taken advantage of the clinic as they might have done.

Although however, the numbers attending have not come up to expectations, the results obtained have been very satisfactory. The maternal mortality has been nil ; the mothers have all done well. Out of the births, only two children were stillborn, which is a very small number when one considers that all the cases, or at least the large majority, were abnormal. One of the stillbirths was due to an accident of labour which could not have been foreseen. In the other case, the child had been dead some time before birth, due to disease of the mother, who did not present herself early enough for treatment to have effect.

The cost of the clinic, including consultants' fees and part nurses' salary, will amount to £83 for the year, or a cost of £1 9s. 8d. per mother.

Appended are tables giving details of the working at the Clinic.

(1) *Reasons for Sending.*

Contracted pelvis, disproportion (real or suspected)	28
Abnormal presentation	7
Medical reasons	10
Post-natal	4
Miscellaneous	8

(2) *Parity of Patients.*

Para.	..	1	2	3	4	5	6	7	8	9	10
No.	..	24	13	6	2	3	1	1	1	1	1

(3) *Results.*

Delivered at Home	..	..	..	..	..	..	..	..	..	16
Delivered in Hospital—										
Breech delivery	..	..	..	..	..	..	..	..	2	24
Version	..	..	..	..	..	..	..	..	2	
Caesarean Section	..	..	..	..	..	..	..	..	1	
Instrumental delivery	..	..	..	..	..	..	..	..	4	
Induction of labour	..	..	..	..	..	..	..	..	7	
Spontaneous delivery	..	..	..	..	..	..	..	..	8	
Live babies (2 sets of twins)	..	..	..	..	..	..	..	..	..	40
Stillborn	..	..	..	..	..	..	..	..	..	2
Not yet delivered	..	..	..	..	..	..	..	..	..	13

Natal Work.—Of the total births in the city, 2,978 or 40·42 per cent. took place in institutions or nursing homes. The gradual increase in this number each year indicates that women are appreciating more and more the advantages of having their confinements away from the worries and distractions of home.

An analysis of the births registered as occurring in the various lying-in institutions in the city is given in the following table:—

Institution.	No. of births.	Percentage of total registered.
Leeds Maternity Hospital	1,678	22·77
St. James's Hospital	732	9·93
St. Mary's Infirmary	272	3·69
Hope Hospital	7	0·10
Hospital for Women	13	0·18
Private Nursing Homes	276	3·75
Total	2,978	40·42

SCHEME FOR UTILISATION OF MATERNITY BEDS IN PUBLIC ASSISTANCE HOSPITALS.
REPORT FOR YEARS 1929, 1930, 1931 AND 1932.

	ST. JAMES' HOSPITAL.				ST. MARY'S INFIRMARY.			
	1929.	1930.	1931.	1932.	1929.	1930.	1931.	1932.
Number of Beds reserved ..	3	3	3	3	6	6	6	6
Total Number of Cases for which accommodation is available ..	78	78	78	78	156	156	156	156
Number of Cases treated—								
(a) Normal ..	38	25	23	9	101	102	95	104
(b) Abnormal ..	4	4	3	2	27	28	39	29
(c) Not delivered ..	6*	3†	3*	3†	9†	8	8*	5
TOTAL ..	48	32	29	14	137	138	142	138
Number of Births—								
(a) Full term ..	42	27	24	10	120 ||	118	124	121
(b) Premature ..	..	..	..	2 ||	6	7	6 ||	7
(c) Stillborn ..	..	..	2	..	2	5	..	5
(d) Miscarriage ..	..	..	..	..	..	..	..	..
TOTAL ..	42	29	26	12	128	130	135	133
Average length of stay (in days) ..	12·6	13·7	17·0	12·7	14·2	14·5	15·6	13·4
Total Cost per case ..	£2 17s. 5½d.	£3 1s. 7d.	£3 16s. 7½d.	£2 17s. 2½d.	£3 3s. 9½d.	£3 5s. 6½d.	£3 9s. 11½d.	£3 0s. 2½d.
Cost per case per week ..	£1 11s. 9½d.	£1 11s. 6d.	£1 11s. 6d.	£1 11s. 6½d.	£1 11s. 4½d.	£1 11s. 6d.	£1 11s. 6d.	£1 11s. 6½d.
Gross Cost to Corporation ..	£137 18s. 6½d.	£98 11s. 0d.	£111 3s. 0d.	£40 1s. 0d.	£436 19s. 0½d.	£452 5s. 0d.	£496 16s. 0d.	£415 3s. 6½d.
Total nett cost to Corporation ..	1929 ..	1930 ..	1931 ..	1932 ..	1929 ..	1930 ..	1931 ..	1932 ..
Do. do. do. Corporation ..	£89 7s. 2d.	£96 14s. 10½d.	£101 10s. 10½d.	£120 8s. 0d.	Do. do. do. Corporation ..	£85 10s. 4d.	£85 10s. 4d.	£85 10s. 4d.
Do. do. do. Corporation ..	1930 ..	1931 ..	1932 ..	1932 ..	Do. do. do. Corporation ..	£454 1s. 2½d.	£454 1s. 2½d.	£454 1s. 2½d.
Do. do. do. Corporation ..	£120 8s. 0d.	£120 8s. 0d.	£120 8s. 0d.	£120 8s. 0d.	Do. do. do. Corporation ..	£487 11s. 0½d.	£487 11s. 0½d.	£487 11s. 0½d.
Do. do. do. Corporation ..	£8 1s. 6½d.	£8 1s. 6½d.	£8 1s. 6½d.	£8 1s. 6½d.	Do. do. do. Corporation ..	£447 3s. 0d.	£447 3s. 0d.	£447 3s. 0d.

* Includes 1 baby born before arrival.

† Includes 2 babies born before arrival.

‡ Includes 2 twin babies.

Illegitimate Births in Institutions.—Of the 2,978 births which took place in institutions, 381 or 10·7 per cent. were illegitimate.

This is an increase of 39 on the figure for last year.

Besides contributing to the upkeep of beds at the Maternity Hospital, the Health Committee maintains six beds at St. Mary's Infirmary and three at St. James's Hospital. The table on page 144 gives the details of the utilization of the maternity beds in the Public Assistance Hospitals during the year.

Specialist Service.—Facilities are provided by the Local Authority whereby medical practitioners may have the help of a specialist in case of doubt or difficulty. The number of claims received from consultants for services rendered in connection with this scheme was 28 and the total cost to the Corporation was £71 14s.

Maternity and Nursing Homes.—The number of registered nursing homes in the city on December 31st, 1931, was 28.

The following table gives particulars as to the registration of maternity and nursing homes during 1932 :—

	Maternity Homes.	Other Nursing Homes.
No. of existing registered Homes on January 1st, 1932	22	6
No. of applications for registration ..	2	..
No. of Homes registered	2	..
No. of Orders made refusing or cancelling registration .. .. .	..	..
No. of Appeals against such Orders ..	..	..
No. of Cases in which such Orders have been :—		
(a) Confirmed on appeal .. .. .	..	..
(b) Disallowed .. .. .	..	..
No. of applications for exemption from registration	3	1
No. of Cases in which exemption has been :—		
(a) Granted	3	1
(b) Withdrawn .. .. .	..	..
(c) Refused .. .. .	..	..
No. of Cases in which registration voluntarily surrendered	3	..

The total number of registered nursing homes on December 31st, 1932, was 27, comprising :—

Maternity Homes	..	..	..	..	9
Maternity and General Nursing Homes	..				12
General Nursing Homes	..	..	..		6

All registered homes were visited regularly and inspected, the number of visits paid for this purpose being 68.

Four houses were visited in connection with the infringement of the Nursing Homes' Act.

Ambulance Service.—For the number of cases removed to the various lying-in institutions by the special ambulance provided and maintained for the purpose, see page 73.

Maternal Mortality.—During the year, 21 mothers lost their lives in childbirth, as compared with 39 for the previous year. The rate of mortality for the city was 3.0 as compared with 5.4 for 1931, and is the lowest on record for the last 14 years. In respect of mothers who attended the ante-natal clinics the rate was 1.89 or 37 per cent. less than for the whole city.

It is interesting to note that 50 per cent. of the deaths occurred in primiparae. Labour is naturally more difficult and more liable to require interference in primiparae, and this emphasises how essential it is that primiparae, especially, should have every careful medical supervision and examination throughout their pregnancies and skilled attention during labour, and the puerperium. Such facilities are provided in the city for all women, but it is obvious that our efforts must be carried beyond this, to the education of prospective mothers, because unless we create a mother sense in those who do not possess it, we shall not achieve the task of still further reducing the maternal mortality rate. I am not sure that too much has not been made of the dangers of childbearing and that instead of a feeling of confidence and security, we have not engendered in those who are about to become mothers, fear and a feeling of insecurity. In my opinion, the negative aspect of the subject has been overemphasised, and the positive correspondingly neglected. More should be said about maternal "vitality" and less about maternal "mortality." Many women to-day approach childbirth oppressed with the imminence of disaster instead of being elated with joy that a child is about to be born.

The table on page 131 gives particulars of the maternal death-rate in Leeds for the last 4 years.

Stillbirths and Neo-natal Mortality.—The number of still-births in 1932 was 355 or 4.9 per cent. of the total births notified, as compared with 406 or 5.4 per cent. for 1931.

COMPARISON BETWEEN LIVE BIRTHS AND STILLBIRTHS FOR THE
LAST ELEVEN YEARS.

Year.	Live births notified.	Stillbirths notified.	Total births notified live and still.	Percentage of stillbirths to total births.
1922	8,658	418	9,076	4.6
1923	8,264	379	8,643	4.4
1924	8,105	348	8,453	4.1
1925	8,034	334	8,368	4.0
1926	7,828	380	8,208	4.6
1927	7,582	367	7,949	4.6
1928	7,497	388	7,885	4.9
1929	7,210	382	7,592	5.0
1930	7,444	357	7,801	4.6
1931	7,119	406	7,525	5.4
1932	6,907	355	7,262	4.9

Notification of Births Act came into force in Leeds 1st January, 1914

The following table gives the analysis of the causes of neo-natal mortality during the last ten years in Leeds :—

NEO-NATAL MORTALITY.

Cause of Death.	1923.	1924.	1925.	1926.	1927.	1928.	1929.	1930.	1931.	1932.
Congenital malformation	21	21	19	30	23	14	23	21	20	15
Premature birth ..	152	136	134	133	120	153	148	138	105	118
Atrophy, debility and marasmus ..	41	32	39	32	15	25	26	32	15	13
Atelectasis ..	24	17	15	19	19	16	19	17	10	21
Injury at birth ..	22	23	18	19	17	10	18	16	20	16
Suffocation including overlying ..	1	7	10	4	11	11	17	8	9	8
Diarrhœa-enteritis ..	35	15	12	12	8	7	5	7	7	8
Syphilis ..	12	10	9	9	2	2	4	3	3	1
Pneumonia ..	11	11	8	12	12	7	19	11	5	8
Convulsions ..	29	21	19	17	21	18	16	13	12	13
Other causes ..	15	38	26	25	26	23	19	25	27	34
Total ..	363	331	309	312	274	286	314	291	233	255
Notified stillbirths ..	379	348	334	380	367	388	382	357	406	355

Every mother who gives a history of miscarriage, stillbirth, or death of her infant in early childhood is visited and advised what to do to avoid a similar result should she again become pregnant.

The neo-natal mortality remains unduly high but unless expectant mothers can be induced to submit themselves to ante-natal examination and supervision the hope of reducing it is slender.

Post-natal Supervision.—There is no separate post-natal clinic for mothers, but if any abnormality is suspected when a mother makes her first attendance with her infant, she is referred to the ante-natal clinic for examination, and when necessary, sent for treatment to her own doctor, or to hospital. During the year, 23 cases were referred for treatment. Those included:—uterine prolapse 3; repair of cervix or perineum 2; irregular haemorrhage 5; backache with discharge 2; mastitis 3; albuminuria 2; other medical reasons 4; sciatica from pelvic cause 1; and fibroids 1. Of these, 10 were referred to the Hospital for Women, 4 to the Maternity Hospital, 6 to the Infirmary, 1 to St. James's Hospital, and 2 were referred to their own doctors.

Mothers whose health would be likely to be impaired by further pregnancies are referred to the gynaecological clinic at the Maternity Hospital where they receive advice and instruction in the use of contraceptives in accordance with the recommendations of the Ministry of Health embodied in Memorandum 153/M.C.W.

Post-natal Work.—The number of births notified during the year exclusive of stillbirths was 6,907 or 93·7 per cent. of the total births registered.

Infantile Mortality.—There was a total of 617 infants under one year who died during 1932. The principal causes contributing to the infant death-rate in order of numerical importance were premature birth (128), pneumonia, all forms (106), gastro-enteritis, enteritis, and allied disorders (94).

During the last two years the number of infant deaths has increased. There can be no doubt that the continued industrial depression, resulting in deficient dietaries for both mothers and children, but especially for mothers, is beginning to have its effect on the health of the children. An expectant mother fed on a deficient

dietary, of necessity, must supply her young with the essentials of growth at the expense of her own tissues, and at term, her resources must be nearing exhaustion. The effects of this is twofold, first, to impair her capacity to nurse her baby, and secondly to unfit her for her domestic duties increased as they are by the new arrival. Neglect is apt to follow and in its train disease. Furthermore, in such circumstances though the infant at birth may be of average weight and apparently healthy, it has but a scanty store of vitamins, especially vitamins A and D, as a result of which its resistance to morbid influences is low and it readily succumbs to whatever infection may be prevalent.

Faulty hygiene and environmental conditions naturally increase the likelihood of infection. The table on page 150 indicates the housing conditions of some of the families where infant deaths occurred. It will be noted that only 28 per cent. of the parents of these infants were living in good housing conditions; 63·5 per cent. were living in back-to-back houses, of which about 50 per cent. were overcrowded.

The table on page 151 gives particulars of the different infant deaths in relation to family circumstances, from which it will be seen that 56·7 per cent. occurred in poor families where the mothers were presumably not getting an adequate diet. Only 11·8 per cent. were in good circumstances, and of those the largest number of deaths were due to premature birth or injury at birth, and not to disease.

An analysis of the causes of infant death in relation to the child's position in the family is given in the table on page 152.

Of the total number of deaths of infants during the year, 104 were less than one day old, 85 from 1-7 days, and 24 between one and two weeks. That means that 213 or 34·5 per cent. of the total deaths under one year took place in the first two weeks of life, that is during the period before the child comes under the supervision of an infant welfare centre.

Most of these deaths, it will be noted, were due to premature birth, injury at birth, or congenital defect in the infant. They really belong to the ante-natal and natal periods, inasmuch as it is only by care and attention during those periods that they could be avoided.

INFANT MORTALITY AND HOUSING 1932.

Cause of Death.	Total.	Back- to-Back.	Over- crowded Back- to-Back.	Over- crowded Through.	Over- crowded Through.	Rooms	Over- crowded Rooms.	Over- crowded Caravan	Not known.
Premature birth	128	64	20	52	2	5	4	..	7
Pneumonia (all forms) ..	106	77	47	20	5	4	3	3	2
Gastro enteritis, enteritis & allies	96	63	35	20	5	9	6	3	1
Infectious Diseases	48	35	18	13	2	..	..	..	..
Congenital Malformations ..	31	19	7	7	1	1	1	..	4
Other Respiratory Diseases ..	27	18	13	9	2	..	..	..	..
Atrophy, debility and marasmus	23	15	6	5	1	1	..	..	2
Atelectasis	21	14	5	7	..	..	..	..	..
Injury at birth	16	11	3	5	..	..	..	..	..
Tuberculosis	11	5	3	6	1	..	..	..	..
Suffocation including overlying ..	10	6	4	1	..	..	..	..	3
Miscellaneous	100	65	34	28	5	5	4	..	2
Total	617	392	195	173	24	25	18	6	21
Percentage .. ..	..	63.5	49.7	28.0	13.9	4.1	72.0	1.0	3.4

INFANT MORTALITY AND FAMILY CIRCUMSTANCES 1932.

Cause of Death.	Total.	Out of Work.	Poor.	Fair.	Fairly good.	Good.	Superior.	Not known.
Premature Birth	128	24	12	21	41	13	12	5
Pneumonia (all forms) .. .	106	21	21	29	27	5	1	2
Gastro enteritis, enteritis and allies ..	96	34	12	24	19	3	1	3
Infectious Diseases.. .. .	48	10	8	10	12	6	2	..
Congenital malformations	31	7	1	6	8	4	1	4
Other respiratory diseases	27	4	5	7	8	2	1	..
Atrophy, debility and marasmus	23	5	1	7	7	1	..	2
Atelectasis	21	3	3	4	8	2	1	..
Injury at Birth	16	2	1	3	6	3	1	..
Tuberculosis	11	3	1	..	5	2	..	..
Suffocation including overlying	10	2	2	3	1	..	..	2
Miscellaneous	100	21	13	20	30	9	3	4
Total	617	136	80	134	172	50	23	22
Percentage .. .. .	..	22.0	13.0	21.7	27.9	8.1	3.7	3.6

INFANT MORTALITY AND POSITION IN FAMILY 1932.

Cause of Death.	Total	1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th	11th	12th	13th	14th	Not known
Premature Birth	128	34	37	14	13	5	7	..	2	4	1	2	1	2	1	5
Pneumonia (all forms) ..	106	24	16	11	11	14	7	9	3	4	3	..	1	..	..	3
Gastro Enteritis, Enteritis & Allies	96	24	23	12	11	12	3	2	2	..	1	2	1	..	..	3
Infectious Diseases	48	7	15	7	7	5	3	1	..	..	3	..	..	..	..	..
Congenital malformations ..	31	11	6	1	4	1	2	1	..	1	..	..	..	..	..	4
Other respiratory diseases ..	27	7	2	5	3	3	3	..	2	2	..	..	..	..	..	..
Atrophy, debility and marasmus ..	23	6	5	3	2	1	3	1	..	..	..	..	..	..	..	2
Atelectasis	21	9	5	4	..	1	..	1	1	..	..	..	..	..	..	..
Injury at Birth	16	12	1	..	1	1	..	..	..	..	..	..	..	..	..	1
Tuberculosis	11	6	..	..	..	2	1	1	1	..	..	..	..	..	..	..
Suffocation, including overlying ..	10	..	1	2	1	1	..	..	1	..	1	..	..	..	..	3
Miscellaneous	100	24	27	14	13	8	1	3	4	..	..	2	..	1	..	3
Total	617	164	138	73	66	54	30	19	16	11	9	6	3	3	1	24
Percentage		26.6	22.4	11.8	10.7	8.8	4.8	3.1	2.6	1.8	1.5	1.0	0.5	0.5	0.2	3.9

Home Visiting.—The total number of visits paid by the health visitors during the year amounted to 131,309, of which 102,874 were first visits, and routine visits to children up to 5 years. The number of visits to expectant mothers was 4,343.

A complete summary of the work of the health visitors is appended.

	VISITS.
Notified births including re-visits	102,874
Stillbirths and deaths under one month including re-visits	789
Death investigations of children from one month—five years	682
Ophthalmia Neonatorum	114
Measles	5,073
Whooping Cough	1,862
Pneumonia	1,295
Epidemic Diarrhoea.. .. .	2
Expectant Mothers	4,343
Special visits (medical aid claims 542, cancer 67, and others 644)	1,253
Visits to ill children notified from the Leeds General Infirmary and Public Dispensary..	938
Visits to children under the Children Act, 1908 ..	691
Ineffectual visits	11,393
Total visits for the year	<u>131,309</u>

Infant Protection Visits.—During the year 691 visits were paid to boarded out children by the health visitors who are the Infant Protection Visitors for the purpose of the Children Act, 1908. On December 31st, there were 111 children on the register.

Infant Welfare Centres or Welcomes.—There are 20 infant welfare centres situated in different parts of Leeds.

At the beginning of July, 1932, the Hunslet Welcome was transferred to new premises in Pepper Lane—a house formerly used as a Nursery School by the Education Committee. New premises were also obtained for the Woodhouse Welcome at the Mission House in North-West Road, which was opened in October, 1932.

It is hoped that St. Nicholas branch will be moved into more suitable quarters at no distant date.

BABIES UNDER ONE REGISTERED DURING YEAR 1932.

WELCOME.	0-1 month.	1-3 months.	3-6 months.	6-12 months.	Total.
Ellerby ..	122	88	20	13	243
West Street ..	128	124	37	27	316
Burmantofts ..	109	121	40	21	291
Hunslet ..	125	87	15	17	244
University ..	75	100	38	13	226
Woodhouse ..	94	93	23	19	229
Holbeck ..	138	95	31	51	315
Armley ..	118	122	27	44	311
Chapelton ..	125	128	41	43	337
St. Nicholas ..	115	89	25	33	262
Bramley ..	48	77	10	22	157
New Wortley ..	104	60	17	36	217
Middleton ..	61	44	9	25	139
Meanwood ..	27	38	8	7	80
West Hunslet ..	110	108	36	30	284
Harehills ..	45	104	34	14	197
Cross Gates ..	26	32	12	19	89
Burley ..	83	106	32	30	251
Halton ..	27	62	18	14	121
Kirkstall ..	17	36	11	10	74
Totals ..	1,697	1,714	484	488	4,383

BABIES OVER ONE REGISTERED DURING YEAR 1932.

WELCOME.	1-2 years.	2-3 years.	3-4 years.	4-5 years.	Total.
Ellerby ..	24	24	10	8	66
West Street ..	47	31	17	5	100
Burmantofts ..	28	23	12	2	65
Hunslet ..	22	12	17	6	57
University ..	22	18	18	9	67
Woodhouse ..	36	13	15	6	70
Holbeck ..	45	28	17	10	100
Armley ..	43	41	34	20	138
Chapelton ..	50	38	31	11	130
St. Nicholas ..	30	31	10	5	76
Bramley ..	26	11	6	7	50
New Wortley ..	22	18	16	5	61
Middleton ..	34	18	24	13	89
Meanwood ..	12	7	5	7	31
West Hunslet ..	22	17	10	9	58
Harehills ..	28	15	4	6	53
Cross Gates ..	7	11	5	2	25
Burley ..	23	21	11	4	59
Halton ..	14	10	19	6	49
Kirkstall ..	13	15	13	6	47
Totals ..	548	402	294	147	1,391

ATTENDANCES MADE AT INFANT WELFARE CENTRES DURING
YEAR 1932

WELCOME.	Consultations and meetings.			Morning treatment.			
	Mothers.	Babies under 1 year.	Babies 1—5 years.	Mothers.	Babies under 1 year.	Babies 1—5 years.	Callers.
Ellerby ..	5,459	2,812	1,667	20	377	103	141
West Street ..	1,939	4,725	3,065	92	997	812	135
Burmantofts ..	5,069	3,943	2,422	312	1,542	567	2
Hunslet ..	3,822	4,146	2,433	10	377	63	59
University ..	3,303	3,301	2,632	89	700	180	283
Woodhouse ..	2,309	3,324	2,129	4	226	41	5
Holbeck ..	3,136	4,878	2,946	192	1,155	232	313
Armley ..	2,974	3,383	2,521	620	1,382	2,054	819
Chapeltown ..	2,517	3,807	1,878	2	647	43	25
St. Nicholas ..	4,557	3,518	1,857	18	533	231	748
Bramley ..	1,051	1,999	1,675	7	291	42	98
New Wortley..	1,597	2,905	2,040	248	849	321	41
Middleton ..	1,334	1,891	2,214	—	84	19	—
Meanwood ..	55	1,126	825	4	153	1	6
West Hunslet..	1,464	4,338	2,638	10	600	185	—
Harehills ..	497	2,420	1,151	7	309	4	5
Crossgates ..	435	935	910	3	64	4	4
Burley ..	604	2,933	1,672	—	433	257	21
Halton ..	239	1,573	1,521	9	157	484	24
Kirkstall ..	53	1,022	800	22	204	85	1
Totals ..	42,414	58,979	38,996	1,669	11,080	5,728	2,730

The number of new babies under one year of age admitted to the Welcomes during 1932 was 4,383, between one and two years 548, and between 2 to 5 years 843. Of the total children born during the year, 62.6 per cent. attended at one or other of the Welcomes as compared with 61.4 per cent. for last year. The total number of names on the registers at the Welcomes at the end of the year was 10,023 as compared with 10,083 for 1931, and the total attendances of all babies at all the Welcomes during the year was 114,783 which includes attendances at the morning treatment clinics. This is an increase of 6,850 on the previous year.

The mortality rate of infants attending the Welcomes was 48 as against 88 for the city, which again proves that the Welcome child has a better chance of survival, and consequently also better health, than the child who does not attend a Welcome.

Infant Consultations.—The number of infant sessions at six of the Welcomes is 3 per week, at eight 2, and at six 1. In addition, special sessions for massage and the treatment of minor ailments are held at 12 Welcomes.

Clinics for the treatment of mothers and babies by artificial sunlight are held at Central, Armley, Holbeck and Hunslet Welcomes.

Dental, Orthopædic, Venereal diseases, and Immunisation clinics are also held at Central Welcome.

Medical Findings at the Welcomes.—The table on page 157 gives details of the condition of children on their admission during 1932 with the percentages of normal children for each clinic. It will be noted that the average percentage of normal children at their first attendance for all clinics was 55.8 per cent. The table on page 158 indicates the defects discovered at the Welcomes during the year, with in addition the number of attendances made by each child. As in previous years minor defects were treated at the Welcomes, more serious were referred to the family doctor—if there was one—or to the hospitals.

The total number of defects was 8,612. The largest groups were minor digestive disorders 2,260, debility and malnutrition 1,557, and rickets 947. These numbers are very similar to those of last year.

Adenoids and Enlarged Tonsils Investigation.—This investigation was continued as in previous years.

DEFECTS DISCOVERED IN NEW CASES ON ADMISSION TO THE CLINICS, IN 1932.

Condition.	Elberby.	West Street.	Burmanlots.	Hunslet.	University.	Woodhouse.	Holbeck.	Armley.	Chapeltown.	St. Nicholas.	Bramley.	New Wortley.	Middleton.	Meanwood.	West Hunslet.	Crossgates.	Harehills.	Burley.	Haltom.	Kirkstall.	Total.
Normal ..	142	206	154	152	157	124	192	206	229	195	101	96	97	81	157	68	129	202	84	24	2,796
Malnutrition ..	34	10	62	25	17	52	31	13	24	22	25	18	6	5	13	9	8	42	11	18	446
Debility ..	9	52	18	15	12	8	7	53	25	8	7	1	6	2	4	4	8	11	8	1	446
Rickets ..	11	32	14	10	9	49	23	26	42	28	7	6	4	6	36	2	7	20	1	9	245
Minor digestive disturbances ..	96	36	31	27	4	25	28	52	14	28	16	22	3	6	3	3	2	15	3	12	289
Enlarged Tonsils and Adenoids ..	2	1	5	16	1	4	8	8	4	6	2	5	2	1	6	4	2	5	8	8	65
Developmental defects ..	8	6	11	8	4	41	29	7	5	8	10	23	2	2	27	2	4	6	15	9	230
Skin diseases ..	6	11	6	10	7	15	16	7	6	13	7	11	4	3	10	2	4	6	1	2	147
Bronchitis ..	4	15	4	10	17	1	2	10	9	11	..	3	2	1	5	..	5	1	2	2	83
Phimosis ..	..	10	..	..	..	1	..	11	1	..	..	..	6	..	4	..	1	..	1	3	73
Dental Caries ..	..	..	..	3	..	4	..	11	1	2	1	..	3	..	..	..	1	..	1	1	51
Infant feeding difficulty ..	2	7	1	1	..	1	23	1	..	1	..	..	8	..	..	..	..	..	..	..	117
Inflammatory eye conditions ..	3	1	..	10	..	3	6	4	6	10	..	18	2	1	34	..	1	6	..	32	86
Unilateral Hernia ..	5	9	4	4	9	1	..	..	16	1	1	..	8	..	5	1	15	..	..	..	100
Otorrhoea ..	..	14	..	1	1	3	1	5	..	..	..	..	2	..	7	..	1	..	..	1	22
Prematurity ..	..	1	4	3	3	2	8	3	..	5	3	4	..	..	..	2	..	1	..	..	55
Squint ..	3	..	3	4	..	1	1	..	..	..	..	..	..	..	1	..	..	1	..	3	11
Infectious Diseases ..	..	..	..	..	..	1	..	..	..	2	1	1	..	..	..	..	..	..	..	..	8
Acute Gastro Enteritis ..	..	..	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	20
Granulating Umbilicus ..	1	1	3	1	..	..	11	..	..	..	..	9	..	..	..	..	..	..	..	..	8
Infantile Paralysis ..	..	..	..	..	..	..	..	..	1	2	..	..	1	..	..	..	..	..	..	..	..
Nocturnal Enuresis ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Cervical Adenitis ..	..	..	..	..	..	..	..	3	..	1	..	1	..	..	1	..	..	..	..	1	5
Mental Deficiency ..	..	3	..	..	..	1	..	..	1	1	..	..	..	..	..	..	..	..	..	..	8
Abscess or minor sepsis ..	..	..	..	1	..	..	1	1	..	..	1	..	..	..	..	..	..	1	..	..	2
Mongol ..	1	1	..	..	..	..	1	1	..	..	..	..	..	..	..	..	..	..	1	3	3
Worms ..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2
Stomatitis ..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	1	1
Veneral Disease ..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	3
Nasal Catarrh ..	..	..	..	..	..	..	2	..	..	..	1	..	..	..	..	..	..	..	..	..	1
Rheumatism ..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	1	..	2
Inguinal Hernia ..	1	..	..	5	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1
Miscellaneous ..	4	3	..	..	2	8	10	..	3	2	..	..	3	1	4	2	1	..	1	15	64
Total Defects ..	262	415	307	287	253	359	401	435	400	337	181	231	150	103	332	99	202	317	132	155	5,358
Total number of cases included in the above ..	254	374	307	273	253	296	359	378	393	322	177	215	149	102	300	96	202	302	130	129	5,011
Percentage of Normal Children ..	55.9	55.1	50.2	55.7	62.1	41.9	53.5	54.5	58.3	60.6	57.1	44.7	65.1	79.4	52.3	70.8	63.9	66.9	64.6	18.6	55.8

Average percentage of normal children for all clinics is 55.8%

MEDICAL FINDINGS AT THE INFANT WELFARE CENTRES DURING 1932 AND RESULTS.

Attendances for Medical Examination.	One to five attendances.				Six to ten attendances.				Ten to twenty attendances.				Over twenty attendances.				Totals.
	Cured.	Im- proved.	In statu quo.	Referred elsewhere and/or result unknown.	Cured.	Im- proved.	In statu quo.	Referred elsewhere and/or result unknown.	Cured.	Im- proved.	In statu quo.	Referred elsewhere and/or result unknown.	Cured.	Im- proved.	In statu quo.	Referred elsewhere and/or result unknown.	
Defect—																	
Malnutrition ..	26	179	164	30	48	191	49	4	59	129	23	2	7	16	1	..	928
Debility ..	20	140	100	67	12	103	37	3	16	82	15	..	4	27	3	..	629
Minor digestive distur- ances ..	340	206	125	94	516	175	25	17	484	149	9	..	66	46	3	5	2,260
Rickets ..	14	187	216	109	17	151	47	5	22	98	26	3	4	15	1	2	917
Rickets with deformity ..	..	5	15	2	..	3	4	..	..	..	..	..	..	..	..	..	30
Skin diseases ..	114	37	30	36	132	32	10	1	123	15	4	2	14	7	..	1	558
Bronchitis ..	169	49	59	32	255	27	20	9	206	56	8	1	41	18	1	..	951
Developmental defects ..	46	23	71	24	56	27	33	1	43	24	15	2	7	9	8	1	390
Enlarged tonsils and adenoids ..	26	6	82	55	16	2	52	12	11	3	27	..	1	1	3	..	297
Inflammatory eye con- ditions ..	50	8	6	12	64	3	1	1	44	4	2	..	11	..	1	..	207
Otorrhoea ..	32	14	12	12	44	7	2	3	52	12	3	1	6	..	..	..	200
Dental caries ..	18	4	47	27	8	1	5	3	4	3	3	..	2	..	..	..	125
Infectious disease ..	78	..	1	8	103	1	1	..	76	2	1	4	10	1	..	..	286
Acute gastro enteritis ..	53	2	..	2	75	2	..	2	68	4	..	..	6	1	..	1	216
Umbilical hernia ..	21	14	24	8	27	7	8	4	13	3	3	..	2	..	..	..	134
Phimosis ..	29	..	44	32	40	..	10	2	21	1	4	3	6	..	..	..	192
Squint ..	..	2	15	9	..	3	7	2	2	..	6	1	1	..	..	..	48
Adenitis ..	..	1	..	4	..	..	1	..	2	..	..	..	..	..	..	..	18
Mental deficiency ..	..	..	3	7	..	..	3	..	..	..	..	..	..	..	..	..	13
Tuberculosis ..	..	3	1	2	..	1	..	..	1	..	1	2	..	..	..	..	11
Rheumatism ..	..	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	6
Congenital heart disease ..	..	1	1	2	..	..	3	1	..	..	..	..	..	..	1	..	10
Worms ..	2	2	5	2	1	3	2	..	3	4	1	1	1	..	..	..	27
Infant paralysis ..	..	1	1	1	..	..	1	..	..	2	..	2	..	..	..	..	6
Enlarged glands ..	6	7	11	2	..	1	..	..	2	..	..	2	..	..	..	1	3
Syphilis ..	..	..	..	..	..	..	..	..	..	3	..	..	..	1	..	..	35
Burn ..	1	..	1	..	1	..	..	..	1	..	..	..	..	..	..	..	3
Anaemia ..	1	1	10	1	..	4	2	..	..	3	..	..	..	1	..	..	22
Torticollis ..	2	..	..	..	1	..	..	..	..	..	..	1	..	..	..	..	4
Pink disease ..	..	..	..	..	3	1	..	..	1	..	..	..	..	..	..	..	7
Nasal catarrh ..	..	6	4	1	..	3	3	..	..	5	1	..	..	..	..	..	33
Miscellaneous ..	6	5	3	7	3	2	2	1	5	4	..	1	2	4	..	..	45
Totals ..	1,056	904	1,052	587	1,435	750	332	71	1,264	607	153	27	191	148	22	13	8,612

Leeds Babies' Welcome Association.—The Maternity and Child Welfare Department continued to work in close co-operation with the Leeds Babies' Welcome Association during the year. The work of the Association is worthy of high commendation. The services of the voluntary workers at the Welcomes continues to be most helpful and much appreciated.

I take this opportunity of extending the thanks of the Maternity and Child Welfare Committee and the Health Department to the Association—President, Officers, Members of Committee, and helpers generally—for their valuable work during the year, and for their constant loyalty and support.

Artificial Sunlight Clinics.—*Central.*—A total of 407 children and 3 mothers were treated at this clinic during the year. In all, 574 examinations were made by the doctor, an average of 15 per session. The attendances during the year of all cases were as follows :—mothers 20, babies under one year 186, children between 1-5 years 5,613, a total of 5,819.

Holbeck.—During the year a total of 261 children and 3 mothers received treatment. The total attendances were as follows :—mothers 62, babies under one year 478, and children between 1-5 years 4,210, a total of 4,750.

The cases for X-ray examination were mostly rickety children for diagnosis and progress during treatment, orthopædic cases, and ante-natal cases where abnormality was suspected. The total number examined included 183 children and 3 mothers.

Armley.—There were 133 children and 7 mothers treated during the year. Altogether 91 attendances were made by mothers, 163 by babies under one year, and 1,955 by children between 1-5 years, a total of 2,209. The number of examinations made by doctor was 380, an average of 14 per session.

Hunslet.—The artificial sunlight treatment at Hunslet was started on August 18th, 1932, and during the remainder of the year 64 children were treated. The total attendances of 727 included 206 by babies under one year, and 521 by children from 1-5 years.

As in previous years the children treated were suffering principally from rickets, malnutrition, general debility, catarrhal conditions, and also for preventative reasons. The table on page 160 analyses the results of treatment at the four clinics for the different conditions.

SUNLIGHT TREATMENT WITH DISEASES AND RESULTS, 1932.

Disease.	Total.	RESULT.					Transferred to Hospital or Clinic.
		Cured.	Improved.	In statu quo.	Still attending.	Defaulted.	
Rickets ..	510	59	154	18	138	120	21
Malnutrition..	83	10	24	2	26	17	4
Debility ..	146	26	56	4	27	28	5
Catarrhal Conditions	13	8	5	..	..	..	..
Preventative ..	56	..	19	3	19	13	2
Miscellaneous ..	91	7	21	5	32	20	6
Total ..	899	110	279	32	242	198	38

Leaving out of account those still attending, defaulted, and those transferred elsewhere, of the remaining 421, 389 or 92.4 per cent. were cured or improved.

[illegible]

Orthopædic Clinic.—A total of 339 children and 4 mothers attended this clinic during the year. Most cases were re-examined in three months time or less, and their progress ascertained. The total number of attendances at the clinic was 690, an average of 16 at each session.

The table on page 161 gives the details of the work done at the Central Orthopædic Clinic. It will be noted that of the 343 cases, 203 were cured or improved, and 28 were transferred to the School Orthopædic Clinic. Twenty-six cases were referred for operation during the year.

Appliances were supplied in 32 cases through the Health Department at a cost of £23 6s. of which £11 os. 3d. was refunded by the parents.

There are now four trained masseuses attending regularly at the welcomes, an additional one having been appointed in April. Two masseuses do artificial sunlight treatment as well as massage. During the year a total of 13,855 massage treatments were given.

There are 10 beds reserved for the use of the Corporation in connection with orthopædics at The Marguerite Home, Thorp Arch, and during the year an average of 7 beds were occupied per week.

Dental Clinic.—The total number of patients who received dental treatment at the Central Clinic during the year was 830, and included 218 expectant mothers, 415 mothers and 197 children.

The number of treatments was:—expectant mothers 1,745, mothers 8,384, and children 782, a total of 10,911. Dentures were supplied to 355 mothers of which 173 were full upper and lower dentures, 39 full upper only, 19 full lower only, 19 full upper and partial lower, two full lower and partial upper, and the remainder (103) partial plates, remodels, and repairs. The total cost to the Corporation was £438 7s. 3d. of which £376 3s. od. was recovered from the patients.

Venereal Disease Clinic.—The total number of new patients referred to this clinic during the year was 39 and included 12 expectant mothers, 11 mothers, and 16 children.

Diphtheria Immunisation.—Details of the work done at the Central Clinic and Armley and Bramley Welcomes in connection with the immunization of children under five years of age are included in the Infectious Diseases Section on page 47.

WORK OF MILK STAFF.

	I. Quarter.	II. Quarter.	III. Quarter.	IV. Quarter.	Year.
Applications dealt with (new)	452	516	493	381	1,842
„ „ (repeat)	4,108	4,339	4,470	4,552	17,469
„ „ (refused)	..	..	..	..	..
No. of re-applications ..	172	133	121	120	546
*No. of external cases dealt with at the office ..	232	192	252	231	907
	4,964	5,180	5,336	5,284	20,764
No. of visits to Welcomes paid by the milk secretaries	157	140	158	158	613

* Persons under treatment at the Public Dispensary and the General Infirmary.

COST OF MILK DISTRIBUTION SCHEME FOR YEAR ENDED
31ST DECEMBER, 1932.

INCOME.			Expenditure		
	£	s. d.		£	s. d.
To cash received for sale of dried milk	2,125	3 7	By salaries and wages	630	7 8
„ cash received for sale of fresh milk	..	..	„ Cost of dried milk	5,631	13 5
			„ Cost of cows' milk	622	13 3
			„ Printing, stationery, etc...	71	7 3
			„ Superannuation	..	..
„ balance—loss	4,889	15 0	Contributions	29	13 0
			„ Sundries	29	4 0
	7,014	18 7		£7,014	18 7

Nett cost per head to Corporation, £1 os. 7d.

AMOUNT OF DRIED MILK DISTRIBUTED IN LBS. (YEAR 1932).

WELCOME.	Free.	Assisted.	Full Price.	Issued through Public Assistance Committee.	TOTAL.
Ellerby ..	4,733 $\frac{1}{4}$	1,987 $\frac{1}{2}$	346 $\frac{1}{2}$	1,010 $\frac{1}{2}$	8,077 $\frac{3}{4}$
West Street ..	4,267 $\frac{1}{2}$	1,316 $\frac{1}{2}$	462 $\frac{1}{2}$	316 $\frac{1}{2}$	6,363
Burmantofts ..	4,945 $\frac{1}{2}$	1,881	1,045 $\frac{1}{4}$	665	8,536 $\frac{3}{4}$
Hunslet ..	3,430	1,901	712	738	6,781
University ..	3,735 $\frac{1}{4}$	1,263	776 $\frac{1}{4}$	418 $\frac{1}{2}$	6,193
Woodhouse ..	2,675	938 $\frac{3}{4}$	1,166 $\frac{3}{4}$	83	4,863 $\frac{1}{2}$
Holbeck ..	4,616 $\frac{1}{4}$	1,626 $\frac{3}{4}$	826	120	7,189
Armley ..	1,977	994	292	129	3,392
Chapelton ..	3,658	1,668 $\frac{3}{4}$	1,158 $\frac{3}{4}$	370	6,855 $\frac{1}{2}$
St. Nicholas ..	3,803 $\frac{1}{4}$	1,737	651	440 $\frac{1}{4}$	6,631 $\frac{1}{2}$
Bramley ..	1,086	852	775	17	2,730
New Wortley ..	2,733 $\frac{3}{4}$	934	318 $\frac{1}{4}$	44	4,030
Middleton ..	2,512	839	252	..	3,603
West Hunslet ..	1,572	902	988	96	3,558
Burley ..	372	116	199	35	722
Crossgates ..	409	172	331	3	915
Halton ..	481	130	386	49	1,046
External ..	628 $\frac{1}{4}$	128	53	16	825 $\frac{1}{4}$
Totals ..	47,635	19,387 $\frac{1}{4}$	10,739 $\frac{1}{4}$	4,550 $\frac{3}{4}$	82,312 $\frac{1}{4}$

NUMBER OF RECIPIENTS, YEAR 1932 (DRIED MILK).

WELCOME.	Free.	Assisted.	Full Price.	TOTAL.
Ellerby ..	252	90	24	366
West Street ..	236	75	21	332
Burmantofts ..	248	77	61	386
Hunslet ..	209	83	56	348
University ..	167	67	35	269
Woodhouse ..	165	50	76	291
Holbeck ..	174	114	63	351
Armley ..	106	48	31	185
Chapelton ..	233	87	83	403
St. Nicholas ..	262	99	34	395
Bramley ..	51	37	41	129
New Wortley ..	132	57	27	216
Middleton ..	99	59	27	185
West Hunslet ..	100	46	59	205
Burley ..	22	11	15	48
Crossgates ..	28	7	25	60
Halton ..	34	9	33	76
External ..	117	15	5	137
Totals ..	2,635	1,031	716	4,382

AMOUNT OF COWS' MILK DISTRIBUTED IN PINTS. (YEAR 1932).

WELCOME.	Free.	1d. per pint.	2d. and 2½d. per pint.	3d. and 3½d. per pint.	TOTAL.
Ellerby	2,390	1,395½	670½	..	4,456
West Street ..	1,329	155	318	..	1,802
Burmantofts ..	3,551	1,193	518½	..	5,262½
Hunslet	921	590	241	..	1,752
University ..	1,910½	1,046	246	..	3,202½
Woodhouse ..	1,970	823½	295	..	3,088½
Holbeck	585	564½	..	..	1,149½
Armley	858	17	165	..	1,040
Chapeltown ..	2,966½	997	231	..	4,194½
St. Nicholas ..	1,004	511	255	..	1,770
Bramley	1,241	91	348	..	1,680
New Wortley ..	1,868	634	..	..	2,502
Middleton ..	2,455½	835	27	..	3,317½
West Hunslet ..	757	303	58	..	1,118
Burley	766	..	..	..	766
Crossgates ..	1,577½	31	..	..	1,608½
Halton	671½	..	..	..	671½
External	2,050½	407	235	..	2,692½
Totals	28,872	9,593½	3,608	..	42,073½

NUMBER OF RECIPIENTS YEAR 1932

WELCOME.	Free.	1d. per pint.	2d. and 2½d. per pint.	3d. and 3½d. per pint.	TOTAL.
Ellerby	20	12	7	..	39
West Street ..	10	2	3	..	15
Burmantofts ..	16	4	4	..	24
Hunslet	10	5	4	..	19
University ..	18	4	5	..	27
Woodhouse ..	17	5	4	..	26
Holbeck	6	3	..	..	9
Armley	6	1	4	..	11
Chapeltown ..	32	9	3	..	44
St. Nicholas ..	12	7	5	..	24
Bramley	9	2	3	..	14
New Wortley ..	23	7	..	..	30
Middleton ..	17	9	2	..	28
West Hunslet ..	5	3	4	..	12
Burley	8	..	..	..	8
Crossgates ..	7	2	..	..	9
Halton	2	..	..	..	2
External	24	6	2	..	32
Totals	242	81	50	..	373

Milk Distribution.—Particulars respecting the amount of liquid and dried milk supplied to necessitous mothers attending the Welcomes are given in the following tables.

The Almoning Committee met on 51 occasions and considered 7,671 applications which was 207 less than the previous year. In addition it supervised generally the work of the almoners and milk staff, details of which appear in the table on page 163.

During 1932 the amount of dried milk distributed in Leeds amounted to 34.7 tons, of which 21.3 tons were given free to 2,635 mothers and babies, and 13.4 tons were supplied at full or assisted rates to 1,747 mothers and babies. In 1931 the corresponding figures were 18.15 tons given free to 2,479 persons, and 12.34 tons supplied at full or assisted rates to 1,769 persons.

In addition 2.03 tons were distributed at the Welcomes to cases in receipt of Public Assistance, as compared with 1.27 tons for the previous year. The cost of milk supplied to Public Assistance cases is defrayed by the Public Assistance Committee.

The amounts of fresh cows' milk distributed during the year were 3,609 gallons free to 242 babies, and 1,650 gallons at full or assisted rates to 131 babies; in 1931 the corresponding figures were 4,938 gallons free to 322 babies, and 2,558 gallons at full or assisted rates to 236 babies.

THE INFANTS' HOSPITAL, WYTHER.

The accommodation and staffing of the Hospital were the same as in previous years.

Details of the work of the hospital are given in the attached tables. It will be seen that the children dealt with were principally those suffering from rickets, dietetic disorders, malnutrition, and marasmus, with various accompanying ailments. There were also several cases referred from the Orthopaedic Clinic, the General Infirmary, and the Public Dispensary.

Day Nursery.—The number of children admitted for the first time during the year was 45 as compared with 57 for the previous year. The total attendances are given in the accompanying table. The attendances of the children have been more irregular owing to the large number of firms working on short time.

Residential Nursery.—There were 21 children in residence on January 1st, 1932; 94 were admitted during the year, 90 were discharged, and 25 remained in residence on December 31st, 1932. Fifteen of the children were illegitimate. The reasons for other admissions were as follows:—in 30 cases mother expecting confinement, in 53 cases illness of mother, in 10 cases death of mother, in three cases mother deserted, and in four cases mother out at work.

I should like once more to express my own appreciation, and that of the Maternity and Child Welfare Committee of the work of the Executive Committees of the Day and Residential Nurseries, whose services given ungrudgingly have been of great value.

TOTAL ATTENDANCES OF RESIDENT AND DAY CHILDREN AT THE NURSERIES, IN AGE GROUPS FOR THE YEAR ENDED 31ST DECEMBER, 1932.

Nursery.	Whole attendances.				Half attendances.			
	Under 3 years.	3-5 years.	Over 5 years.	Total.	Under 3 years.	3-5 years.	Over 5 years.	Total.
Red House Residential Nursery ..	9,311	..	..	9,311	..	..	..	..
Cobden Place Day Nursery	7,385	1,289	..	8,674	723	94	..	817

SUMMARY OF CASES TREATED IN THE INFANTS' HOSPITAL, WYTHER.

	Males.	Females.	Total.
Remaining in Hospital, January 1st, 1932	22	22	44
Admitted during the year ..	51	72	123
Discharged during the year ..	47	65	112
Died during the year	6	4	10
Remaining in Hospital, December 31st, 1932	20	25	45

Mortality rate per cent. on admissions 8.1. Average stay in Hospital 97 days.

CLASSIFICATION OF ADMISSIONS ACCORDING TO AGE AND SEX.

Males.		Females.		Total Infants.		Grand Total.
Under 1 year.	Over 1 year.	Under 1 year.	Over 1 year.	Under 1 year.	Over 1 year.	
8	43	13	59	21	102	123

ANALYSIS OF DEATHS DURING 1932.

Cause.	Under one year.		Over one year.		Total.
	M.	F.	M.	F.	
Marasmus and Bronchitis	2	2	..	..	4
Marasmus and Enteritis .. .. .	..	1	..	..	1
Broncho Pneumonia and Chronic Enteritis .. .. .	..	..	1	..	1
Pyelonephritis .. .. .	..	..	..	1	1
Chronic Enteritis	1	..	..	..	1
Gastro Enteritis .. .. .	..	1	..	..	1
Rickets, Broncho Pneumonia and Convulsions .. .. .	..	..	..	1	1
TOTAL	3	4	1	2	10

ANALYSIS OF CASES TREATED DURING 1932.

Reason for admission.	Under one year.		Over one year.		Total.
	M.	F.	M.	F.	
Rickets .. .. .	..	..	24	26	50
Rickets and Bronchitis .. .. .	..	..	4	5	9
Rickets and Malnutrition .. .. .	..	1	5	6	12
Rickets and Otorrhœa.. .. .	..	..	1	..	1
Osteoclasia (rickets) .. .. .	..	..	3	2	5
Spinal Kyphosis (rickets) .. .. .	..	..	2	1	3
Malnutrition	1	..	5	20	26
Malnutrition and Enteritis .. .. .	..	1	2	..	3
Malnutrition and Congenital Laryngeal Stridor .. .. .	..	1	..	..	1
Malnutrition and Bronchitis	1	2	1	2	6
Marasmus	6	10	2	3	21
Marasmus and Bronchitis	1	..	1	..	2
Cœliac Disease	1	2	..	..	3
Pink Disease .. .. .	..	..	1	..	1
Mucous Colitis .. .. .	..	..	..	1	1
Gastro Enteritis	1	1	..	..	2
Pyelonephritis .. .. .	..	1	..	..	1
Left Hemiplegia .. .. .	..	..	1	..	1
Broncho Pneumonia	2	..	2	..	4
Dietetic .. .. .	..	2	..	..	2
Chronic Enteritis	1	..	1	..	2
Congenital Dislocation of Hip .. .. .	..	..	..	3	3
Tuberculosis of Knee .. .. .	..	..	1	..	1
Bronchiectasis .. .. .	..	..	..	1	1
Tape Worm .. .. .	..	..	..	1	1
Perthe's disease of Hip .. .. .	..	..	1	..	1
Tuberculous Adenitis .. .. .	..	..	..	1	1
Anæmia .. .. .	..	..	1	1	2
Heart Disease .. .. .	..	..	..	1	1
TOTAL ..	14	21	58	74	167

Convalescent Treatment for Mothers and Babies.—During the year arrangements for the convalescence of mothers with babies through the Leeds Convalescent Society were continued on behalf of the Maternity and Child Welfare Committee.

Four beds were reserved at the Home at Withernsea for Leeds mothers with babies, the remainder being sent to different seaside and country homes.

Convalescence was arranged for 101 mothers with babies, and five mothers without babies. The average period of stay at the Convalescent Homes was 14 days. The nett cost to the Corporation of this provision was £446 os. 1d. or an average of £2 2 0½d. per case per week.

In addition to the above, 159 children under five years were sent for convalescence to Meanwood Convalescent Home. The average stay of each child was 21·3 days and the cost to the Corporation £3 4s. 6d. per case. The parents contributed towards the cost where means permitted. The total cost to the Corporation was £524 19s. 1d. of which £12 5s. 0d. was refunded by the parents.

Health Week.—October 2nd to 8th.—A Maternity and Child Welfare Service has as its main function prevention and education. The educative work goes on continuously but during Health Week a more concentrated effort is made. Special health talks were given by the doctors to the mothers at the various Welcomes, and instructive booklets and leaflets were distributed.

The Leeds Babies' Welcome Association again co-operated in the propaganda work. Special competitions were held for the mothers. In addition to the making and renovating of garments a very valuable competition was that on simple home knowledge questions. Classes of instruction were held previously, and teams from the different Welcomes competed.

Several special meetings were held, which included a social meeting for Maternity and Child Welfare workers, at which Dr. Chodak Gregory gave an address on "The Toddler in the Home and in the Welcome"; a tableau lecture to fathers and mothers was given in the Y.M.C.A. Hall: and a meeting for men only for the fathers at the New Wortley Welcome and their friends.

This subject is further dealt with in the section on Health Education and Propaganda on page 242.

Inspection and Supervision of Food.

INSPECTION AND SUPERVISION OF FOOD.

INCLUDING REPORTS BY
THE CHIEF VETERINARY OFFICER
and
THE CITY ANALYST.

MEAT INSPECTION

BY

J. A. DIXON, M.R.C.V.S., *Chief Veterinary Officer.*

Tuberculous Carcases.—The number of carcases condemned for tuberculosis during 1932 was as follows.—beef with organs 155, pork with organs 52, and veal with organs 2.

Slaughterhouses.—During the year the number of private slaughterhouses was decreased by one, this being a registered slaughterhouse that had fallen into disuse.

SLAUGHTERHOUSES IN USE.

	Number in use on December 31st.					
	1920	1928	1929	1930	1931	1932
Public Abattoir	1	1	1	1	1	1
Private slaughter-houses (registered)	63	46	46	44	43	42
Private slaughter-houses (licensed)	8	10	9	8	9	9
Knackers' Yards	2	2	2	2	1	1

The inspectors paid a total of 7,654 visits to the 51 slaughterhouses, an average of 150 visits, or approximately three visits per week, to each slaughterhouse.

The following table shows the number of animals slaughtered in the Public Abattoir and in private slaughterhouses. It will be noticed that the number of animals slaughtered in both the Public Abattoir and private slaughterhouses last year shows a large increase on previous years which indicates that home-killed meat maintains its position in the public regard.

ANIMALS SLAUGHTERED IN THE PUBLIC ABATTOIR AND IN PRIVATE SLAUGHTERHOUSES.

	Year.	Cattle.	Calves.	Sheep.	Pigs.	Total.
Public Abattoir ..	1930	23,248	9,664	59,413	2,375	94,700
	1931	21,947	8,330	69,405	4,374	104,056
	1932	22,138	9,194	84,794	6,757	122,883
Private Slaughter- Houses ..	1930	15,577	9,851	59,586	41,857	126,871
	1931	14,625	7,842	54,807	40,345	117,619
	1932	14,183	7,793	67,972	44,292	134,240

Public Health (Meat) Regulations, 1924.—These Regulations continue to be well observed and there has been no need to take any action for non-compliance therewith.

Shellfish.—The condition of all shellfish coming into the city for sale, continues to receive special attention.

Precautions have been taken to see that shellfish from places scheduled as unsatisfactory under the Shellfish Regulations were not sold within the city.

During the year three samples of mussels and five samples of cockles were submitted for bacteriological examination and were found to be satisfactory.

Meat and other foods condemned as unsound.—The appended table indicates the amount of diseased and unsound meat and other food condemned and disposed of during the year.

MEAT, ETC., DESTROYED BY CONSENT.

	1932.	1931.	1930.	1929.
Beef	157,181 lbs.	160,380 lbs.	167,752 lbs.	147,635 lbs.
Veal	6,826 "	6,115 "	7,226 "	8,499 "
Mutton	10,805 "	9,213 "	10,756 "	14,504 "
Bacon and Ham ..	570 "	..	1,338 "	60 "
Pork	33,360 "	35,319 lbs.	28,288 "	35,102 "
Offals	112,236 "	96,341 "	88,872 "	81,217 "
Rabbits	15,001 "	10,896 "	16,059 "	9,538 "
Poultry	11,996 "	2,119 "	1,493 "	6,369 "
Game	198 "	782 "	965 "	834 "
Cheese .. ..	..	..	17,376 "	..
Fish	102,653 lbs.	104,649 lbs.	108,230 "	73,060 lbs.
Shellfish	42,576 "	32,889 "	48,678 "	64,447 "
Fruit	7,419 "	23,974 "	26,707 "	13,548 "
Vegetables	84,101 "	129,908 "	92,282 "	112,707 "
Edible fungi	139 "	12 "	275 "	608 "
Yeast .. ..	..	..	709 "	1,652 "
Tinned Goods	6,193 lbs.	4,696 lbs.	3,654 "	2,849 "
Sundries	793 "	..	560 "	14 "
TOTALS	592,047 lbs.	617,293 lbs.	621,220 lbs.	572,643 lbs.
No. of Eggs .. ..	..	..	967	1,968

Food Preparing Places.—The difficulty regarding the proviso exempting from registration those premises where mechanical power is used still persists, but a considerable improvement in the cleanliness of the premises and the methods used in the manufacture of foodstuffs has been noted.

The following table gives a summary of the work done :—

Applications submitted for registration ..	24
Applications granted :—	
(a) Pork butchers	4
(b) Beef butchers	10
(c) Potted meat makers	5
	19
Applications refused	1
do. withdrawn	1
do. held over for alterations (since registered)	3
	5
Number of visits to :—	
(a) Food preparing places	1,020
(b) Restaurants	61
	1,081

Legal Proceedings.—During the year proceedings were taken (a) against a butcher under the Public Health (Meat) Regulations, 1924, for “using a registered slaughterhouse for the slaughter of an animal, which, previous to slaughter, was not intended for human consumption,” defendant pleaded guilty and was fined £3 and costs, and (b) against a fish dealer for “selling jumbo-haddock as hake contrary to Section 2 of the Food and Drugs (Adulteration) Act, 1928,” defendant pleaded guilty and was dismissed under the Probation of Offenders Act on payment of costs.

DISEASES OF ANIMALS ACTS

BY

J. A. DIXON, M.R.C.V.S., *Chief Inspector and Veterinary Inspector.*

The year under review was uneventful as far as contagious disease amongst animals is concerned, and the administration of the Acts and Orders is herewith reported under the headings of the various Orders.

Tuberculosis Order of 1925.—The inspections carried out under the Order, involved the examination of 1,407 cows-in-milk, 161 other cows and heifers, and 22 other bovine animals; 49 animals were slaughtered, all of which on post-mortem examination, were found to be diseased, 27 with tuberculosis of the udder, two giving tuberculous milk and showing lesions of tuberculosis, two with tuberculous emaciation, and 18 with tuberculosis of other organs. The owners of the 49 animals received compensation as follows:—29 at the lowest rate, namely, one-fourth of the agreed market value or 30/–, whichever was the greater, and 20 at the rate of three-fourths of the agreed value.

In addition to dealing with bovine animals suffering from tuberculosis within the city, the Tuberculosis Order empowers the Veterinary Inspector to order the removal from a Market or Auction Mart of any animal which he considers to be affected with the disease within the terms of the Order, and during the year such action was taken with respect to one cow at the Victoria Cattle Market. The animal was slaughtered and on post-mortem examination was found to be suffering from extensive tuberculosis and the carcase and organs were condemned.

ANNUAL RETURN OF THE WORKING OF THE TUBERCULOSIS ORDER
OF 1925, FOR THE YEAR ENDING DECEMBER 31ST, 1932,
ESTIMATED BOVINE POPULATION .. 3,066.

TOTAL NUMBER OF ANIMALS REPORTED	66
(a) By Owner	27
(b) By Veterinary Advisor to owner	2
(c) By Veterinary Officer acting under the Milk and Dairies Order, 1926	37
ANIMALS EXAMINED	1,590
(a) Cows in milk	1,407
(b) Other Cows or Heifers	161
(c) Other Bovine animals.. .. .	22
ANIMALS TESTED WITH TUBERCULIN	1
ANIMALS FOUND DISEASED	49
(a) Having Tuberculosis of the Udder	27
(b) Giving Tuberculous Milk and showing lesions of Tuberculosis	2
(c) Suffering from Tuberculous Emaciation	2
(d) Affected, but not as in a, b, or c	18
COMPENSATION PAYABLE—	£ s. d.
(a) Full value (o)	0 0 0
(b) Three-fourths value (20)	240 0 0
(c) One-fourth value or 30/- (29)	92 15 0
Total Compensation	£332 15 0
Total Salvage received	104 2 11
Nett Compensation	228 12 1
Recoverable from Government, 75% of Gross Compensation	249 11 3
ADMINISTRATION EXPENSES—	£ s. d.
(a) 1. Veterinary examinations	0 0 0
2. Cost of tuberculin	0 0 0
3. Notification fees	0 0 0
(b) Reference to a Pathological Institute	13 0 0
(c) Valuation of Animals slaughtered	0 0 0
(d) Cost of travelling	41 15 8
Total Expenses	£54 15 8

Swine Fever Order of 1908.—During the year 77 cases of suspected swine fever were reported to the Ministry of Agriculture and Fisheries, and after investigation, swine fever was declared to exist in 27 cases.

It may be stated here that every case of unexplained death in a pig is regarded as suspected swine fever and duly reported, which accounts for the discrepancy between the cases reported and those found positive.

At the end of the year four infected places existed in the city as against 23 at the end of 1931.

No infringements of the Order were reported.

Swine Fever Order of 1932.—This was a special Order made owing to the prevalence of swine fever affecting the East Riding of Yorkshire, West Riding of Yorkshire (part of), and city of York. The Order came into operation on the 14th March, 1932, and was revoked on the 11th August, 1932. During that period 5,022 store pigs were moved under licence.

Two infringements of the Order occurred for which one pigkeeper was fined 10/- and costs, and the other 7/- and costs.

Regulation of Movement of Swine Order of 1922.—The administration of this Order has necessitated the issuing of 959 licences for the dispersal of 8,084 pigs from the Whitkirk Auction Mart, whilst 1,748 visits were made to pig-keeping premises to ascertain that the recently removed store pigs were detained and isolated for the proper period.

During the year 21 store pigs were ordered to be removed by licence from the Whitkirk Auction Mart by the Veterinary Officer on account of illness. It was found that swine fever existed in two cases and swine erysipelas in one case.

No proceedings were taken during the year for infringements of the Order.

Parasitic Mange Order of 1911.—No case of parasitic mange occurred during the year.

Exportation and Transit of Horses, Asses and Mules Order of 1911.—No horses, asses or mules were exported during the year.

Anthrax Order of 1928.—Two cases of suspected anthrax were reported during the year, which on investigation were found to be negative.

Sheep Scab Order of 1928.—During the year one case of suspected sheep scab was reported, which on investigation proved to be negative.

A number of contact sheep (233) arrived in the city on licence for immediate slaughter, and the fleeces were immersed in an approved sheep dip for one minute each.

Foot-and-Mouth Disease Order of 1928.—The city was not affected by the Orders made for the control of this disease.

Animals (Landing from Ireland, Channel Islands and Isle of Man) Order of 1923.—The administration of this Order has entailed the issuing of 687 licences for the removal from Victoria Cattle Market of 3,422 cattle and 62 sheep recently landed from Ireland. In addition to these 385 movement licences were issued for the movement of 4,278 cattle and 8,666 sheep recently landed from Ireland but dispersed without passing through the Victoria Cattle Market.

Irish store cattle to the number of 298 were received in the city and these were all duly inspected on arrival and further visits paid to see that they were isolated and detained for the prescribed period of six clear days following their arrival in accordance with the Order.

It was found necessary to take proceedings in one case, and the defendant was fined £2 and costs.

Importation of Canadian Cattle Order of 1923.—The administration of this Order has entailed the issue of only three licences for the removal of 46 Canadian cattle. These were purchased by a Wholesale butcher.

Importation of Dogs and Cats Order of 1928.—One performing lion came to a theatre within the city. The animal was permitted to enter the city on licence and after daily inspections during the week of its stay, when strict isolation was observed, it was re-licensed to another theatre outside the city.

Rabies Order of 1919.—No case of suspected rabies was reported.

Movement of Animals (Records) Order of 1925.—Proceedings were taken against a farmer for failing to keep a record of the animals moved to and from his premises, as required by the Order, and he was fined £1 including costs.

General.—The following Orders were issued by the Minister of Agriculture and Fisheries during the year :—

- (a) Animals (Sea Transport) (Amendment) Order, 1932.
- (b) Foot-and-Mouth Disease (Boiling of Animal Foodstuffs) Order, 1932.
- (c) Importation of Meat, etc. (Wrapping Materials) Order, 1932.
- (d) Imported Animals Order, 1932.
- (e) No. 4989 Amending the Animals (Importation) Order, 1930.

With reference to (b), (c) and (d).

(b) This Order came into force on the 1st November when the original Order of 1928 was revoked. Compared with the Order of 1928 the new Order makes clearer the provisions of Article 1 dealing with the "Precautions to be adopted in regard to certain Animal Foodstuffs," and to Article 4 there is added a definition of "Bones" which includes ground green or raw bones.

(c) This Order, which came into operation on the 1st November, has the effect of prohibiting the packing, carrying or selling of fertilisers and feeding stuffs in any sack made from meat wrappers imported into this country with foreign meat products. This practice, in view of the possibility of its leading to the dissemination of the virus of foot-and-mouth disease, is most undesirable and while Port Authorities will see that imported meat is wrapped in wrappers of the prescribed pattern, it will be necessary for other local authorities to see that such meat wrappers are not subsequently used for any of the purposes mentioned.

(d) This Order came into operation on the 15th April and is an amendment of previous Orders concerning the importation of animals. The object of the Order is to ensure greater control over the movements of animals imported from overseas, including Ireland, the Channel Islands and the Isle of Man. As such the Order is principally concerned with the control of imported animals at the ports of entry, but inland local authorities are also concerned with reference to the authorisation of markets for the sale of newly imported animals and the control and movement of such animals.

The remaining Orders do not call for any special comment.

Veterinary attendance on Corporation Horses.—In addition to the work of the Veterinary Sub-Department already mentioned, the veterinary officers are responsible for the attendance on all horses, cattle and pigs belonging to the Cleansing Department at the Cleansing Depots and various farms, the Education Department, the Parks and Cemeteries Department, the Public Assistance Department, the Sewerage Department, in fact all animals belonging to the Corporation except the horses of the mounted section of the City Police.

These duties entail a large amount of work and responsibility on the part of the veterinary officers and during 1932 brought to the Public Health Department an income of £197 7s. od.

MILK AND DAIRIES

BY

J. A. DIXON, M.R.C.V.S., *Chief Veterinary Officer.*

The popularity of bottled milk has continued to grow. One of the results of this growth has been to encourage the practice amongst producers of non-graded milk of delivering their milk in bottles without using any special designation. While this is not an infringement of the Milk (Special Designations) Order of 1923, it is obviously undesirable, and the law should be amended to deal with the matter.

Town Produced Milk.—Within the city there are 176 dairy farms with an average number of 2,936 milch cows. During the year two farms were added to and none removed from the register. The Veterinary Officers made 11,435 examinations of cows. At 11,361 (99·4 per cent.) of the examinations the cows were clean, and at 74 (0·6 per cent.) dirty. As regards the health of the 2,936 cows examined 66 (2·24 per cent.) were found to be diseased, 15 (0·51 per cent.) having tuberculosis of the udder, 3 (0·10 per cent.) generalised tuberculosis, and 48 (1·63 per cent.) diseases other than tuberculosis. In all cases where tuberculosis was diagnosed, the animals affected were dealt with under the Tuberculosis Order of 1925.

The 176 registered dairy farms comprise 298 separate sheds, all of which were kept under close supervision by the Cowshed and Dairies Inspector. The Veterinary Officers made 1,140 inspections of cowsheds and the lay inspector 1,520, a total of 2,660. In addition 232 visits were paid by the lay inspector in the early morning, to ensure that cleanliness and care are observed then, as at other milking times. At 1,128 (98·95 per cent.) of the Veterinary Officers' visits, the sheds were clean, while at the remaining 12 (1·05 per cent.) they were dirty. The number of yards inspected by the Veterinary Officers was 168, and the total number of inspections 667. At 651 (97·60 per cent.) of the visits, the yards were clean, and at 16 (2·40 per cent.) dirty.

Country Milk.—Every effort has been made to ensure that the milk coming into the city whether by road or rail, is clean and

wholesome. The Inspectors paid regular visits to the railway stations and took samples both for chemical and bacteriological analysis. Where there was need for complaint, the matter was taken up with the Local Authority in whose district the milk was produced.

The following is a summary of the cases taken into Court for infringements of the Milk and Dairies Order during the year.

MILK AND DAIRIES ORDER, 1926.
PROSECUTIONS FOR THE YEAR, 1932.

No.	Article.	Result of Hearing.	Remarks.
1	Article 32	Fined 20/- and costs	Retailer
2	" 6 (3) ..	To pay 8/- costs	"
3	" 6 ..	To pay 4/- costs	"

Graded Milk and Issue of Licences.—The sale of " Pasteurised " milk has continued to expand and that of raw milk to diminish. Other grades with the exception of Certified have also lost popularity largely owing to the increasing desire of the consuming public for a " safe " milk. The extensive publicity given to the subject in recent times has undoubtedly helped considerably to bring about this change in the popular demand.

It is generally agreed by all authorities that the time has arrived when milk should be reclassified and when all raw milk should be required to be produced and distributed under the conditions now laid down for " Grade A ". Milk which fails to reach that standard should be excluded from sale or sold only after efficient pasteurisation.

As stated, in an earlier paragraph, powers are required to regulate the sale of ordinary raw milk in bottles so as to enable the public to distinguish readily between milk that is " graded " and milk that is not " graded." As things are the public can quite easily be deluded into the belief that any milk supplied in a bottle is " graded " milk. The matter is one of considerable importance in view of the fact that children are the greatest consumers of raw milk.

LICENCES ISSUED UNDER THE MILK (SPECIAL DESIGNATIONS)
ORDER, 1923, DURING THE YEAR, AND SHOWING COMPARISON
WITH OTHER YEARS.

Description of Licences.	Number in force on 31st December.				
	1928.	1929.	1930.	1931.	1932.
(1) Producers' Licences to use the designation "Grade A" ..	7	8	8	8	8
(2) Dealers' Licences to use the designation "Certified" ..	7	10	10	10	20
(3) Dealers' Licences to use the designation "Grade A (Tuberculin Tested)" :—					
(a) Bottling establishments ..	2	2	2	2	2
(b) Shops	22	14	11	10	7
(4) Dealers' Licences to use the designation "Grade A" :—					
(a) Bottling establishments ..	4	3	3	3	3
(b) Shops	196	215	211	207	196
(5) Dealers' Licences to use the designation "Pasteurised" :—					
(a) Pasteurising establishments ..	..	1	3	4	4
(b) Shops .. .. .	..	6	5	..	..

The cows at all the farms producing graded milk are examined monthly and the milk examined as to its bacterial content while the premises and methods are under regular supervision and inspection.

Dairy Farms and Milkshops.—The following tables show the number of registered dairy farms and milkshops in the city on December 31st, 1932.

DAIRY FARMS.

Number of dairy farms in the City on the register on

December 31st, 1931	174
Number added to register during the year	2
Number removed from register during the year	—
Number on register on December 31st, 1932	176

MILKSHOPS.

Number of milkshops in the City on the register on December 31st, 1931. (The total of 590 includes 30 dairymen with registered premises in the surrounding County area who are on our register of retail purveyors of milk) 590

Number added during the year (including four in the surrounding County area) 29

Number removed from register during the year .. 40

Number on register on December 31st, 1932 (including 34 in the surrounding County area) 579

The following visits were paid during the year by the Food and Drugs Inspectors and Dairies and Cowsheds Inspector in connection with the Milk and Dairies Acts and Orders :—

	VISITS					
To milkshops	1,837
To cowsheds	1,752
To railway stations..	283
To farms or milkshops <i>re</i> infectious disease	9
To food shops and bottled milk stores	1,314

Biological Tests.—During the year 178 samples were taken and submitted to the City Bacteriologist for biological investigation for the presence of the tubercle bacillus. Of these, 162 were ordinary and 16 were special samples. Of the ordinary samples, five (3·1 per cent.) were returned as tuberculous, whilst 4 (25·0 per cent.) of the special samples were also reported as tuberculous. In each case where a positive result was obtained, veterinary inspection was immediately carried out, either by the officers of this department, or by those of the appropriate County authority, which resulted in the finding and destruction of eight tuberculous cows.

The accompanying table gives details :—

BIOLOGICAL TESTS.

Ordinary Samples.	No.	Positive.
Certified	13	..
Grade A (T.T.)	17	..
Grade A	62	4
Pasteurised	13	..
Raw Milk	57	1
Total	162	5

Special Samples.	No.	Positive.
Grade A.	15	4
Raw Milk	1	..
Total	16	4

Special Bacterial Tests.—One sample of milk was submitted to the City Bacteriologist for special examination to ascertain the bacterial content and the presence of bacillus coli. This was a "Pasteurised" milk, which, on examination, was found to be satisfactory.

Ten samples of dried milk from the stock of the Maternity and Child Welfare Section submitted for bacteriological examination, were all found to be satisfactory.

Public Health (Prevention of Tuberculosis) Regulations, 1925.—Although no official action was necessary under the above-mentioned regulations, they have been found helpful in preventing persons handling milk whilst suffering from tuberculosis in an active and infectious form.

Departmental Laboratory.—During the year 528 samples of milk were submitted to the Departmental Laboratory for bacteriological examination. Of this number 130 were graded milks, 164 pasteurised, 98 before pasteurisation, 67 taken on delivery at local institutions, 31 taken in course of delivery, five at schools, five for the manufacture of ice-cream and 28 from other sources, *i.e.* milk brought to the laboratory by farmers, dairymen and others.

The samples for bacteriological examination were kept at room temperature until the souring point was reached. The average keeping quality of the milks was as follows :—

Graded	3·1 days.
Pasteurised	2·2 „
Raw Milk (for pasteurisation) ..	2·0 „
Institutions	2·3 „
In course of delivery	1·8 „
Schools	1·7 „
For Ice-cream	2·4 „

Twenty samples, of which four were “ Certified ” failed to comply with the standard laid down in the Milk (Special Designations) Order, 1923 ; eleven were from farms outside the city and nine from farms within the city. In each case appropriate action was taken to prevent recurrence of the offence.

Milk Samples Tested by the Gerber Method.—During the year 101 samples of milk were tested in the departmental laboratory by the Gerber method, the results of which were as follows :—

Total.	Genuine.	Deficient in fat only.	Deficient in Solids-not-fat only.	Deficient in fat and Solids-not-fat.
*101	78	12	6	5

* These were all informal samples.

The average composition of the 101 samples was :—

Fat	3·74 per cent.
Solids-not-fat	8·74 per cent.
Total solids	12·48 per cent.

Article 13 (1) of the Milk and Dairies Order, 1926, demands that the water supply to farms shall be suitable and sufficient, and seven samples of water from farms and other dairy premises were examined for the presence of bacillus coli with the following results :—

Containing B. Coli—4.

Free from B Coli.—3.

The following investigations were also undertaken :—

Milk for the presence of tubercle or other bacilli ..	68
Liver (piece) for anthrax	1
Smears on glass slides for anthrax	1

Other work :—

Microscopical slides prepared and examined ..	176
Tubes of media prepared	2,650

SAMPLES EXAMINED AS TO BACTERIAL CONTENT.

Bacterial Content per c.c.	Graded Milk.	Past-eurised Milk.	Raw Milk for past-eurisation.	Institution Milk.	Milk taken in course of delivery.	School Milk.	Milk for Ice Cream.	Ice Cream.	Total.
1-50,000 } 50,000— } 100,000 }	122 93·8%	142 86·6%	71 72·4%	54 80·6%	19 61·3%	4 80·0%	5 100·0%	7 58·3%	424
100,000— } 200,000 }	1 0·8%	11 6·7%	11 11·2%	4 6·0%	5 16·1%	..	..	1 8·3%	33
200,000— } 500,000 }	4 3·1%	8 4·9%	8 8·2%	7 10·4%	5 16·1%	1 20·0%	..	1 8·3%	34
500,000— } 1,000,000 }	1 0·8%	1 0·6%	3 3·1%	2 3·0%	1 3·2%	..	..	2 16·7%	10
1,000,000— } 1,000,000+ }	1 0·8%	1 0·6%	1 1·0%	..	..	..	..	..	3
1,000,000+ }	1 0·8%	1 0·6%	4 4·1%	..	1 3·2%	..	..	1 8·3%	8
Total Samples	130	164	98	67	31	5	5	12	512

SAMPLES EXAMINED AS TO B. COLI CONTENT.

Bacterial Content per c.c.	Graded Milk.	Past-eurised Milk.	Raw Milk for past-eurisation.	Institution Milk.	Milk taken in course of delivery.	School Milk.	Milk for Ice Cream.	Ice Cream.	Total.
B. Coli absent } in 1/10 c.c. }	4 3·1%	18 11·0%	10 10·2%	6 9·0%	7 22·6%	1 20·0%	2 40·0%	..	48
„ 1/100 c.c. } „ 1/1000 c.c. }	16 12·3%	10 6·1%	16 16·3%	7 10·4%	4 12·9%	2 40·0%	1 20·0%	..	56
„ 1/1000 c.c. }	..	26 15·9%	33 33·7%	12 17·9%	11 35·5%	2 40·0%	2 40·0%	..	86
B. Coli present {	110 84·6%	110 67·1%	39 39·8%	42 62·7%	9 29·0%	..	..	12 100·0%	322
Total Samples	130	164	98	67	31	5	5	12	512

As in previous years the laboratory has been found of considerable educational benefit and help to persons engaged in the production and sale of milk—wholesale and retail—and also of interest to others not directly engaged in the business. Individual farmers, dairymen, students, and other members of the community have visited the laboratory from time to time and had explained and demonstrated to them the methods employed for the examination of milk.

FOOD AND DRUGS. FERTILISERS AND FEEDING STUFFS.

Food and Drugs.—The Sampling Officers took 640 formal and 32 informal samples of food other than milk and cream. The total number of formal samples of all kinds taken during the year was 1,887 and informal 106.

The following samples were taken by the Sampling Officers under the Condensed and Dried Milk Regulations and Public Health (Preservatives, etc. in Food) Regulations and submitted to the City Analyst for analysis. The results are shown in the City Analyst's report on page 189.

Article.	No. of Samples.
Condensed milk.	9
Dried milk.	10
Potted meat.	13
Sausages.	37
Potted Beef.	6
Pearl Barley	15

Leeds Corporation Act, 1930. Ice Cream.—During the year a great improvement has been noted in the conditions under which this commodity is manufactured, the majority of the premises being clean and quite well kept. Defects or contraventions found have in all cases been immediately rectified.

It is regrettable that the open ice-cream freezer is still to be seen in the streets in spite of the competition from reputable firms who sell the commodity only in wrapped or covered cartons. Apart from the danger from dust there is the risk of contamination from careless handling and dirty utensils.

During the year seven theatres and picture theatres have been registered for the sale of ice-cream. In every case the ice-cream sold in the auditorium is in wrapped or covered cartons. One theatre has been registered for both manufacture and sale. The ice-cream sold from the bars and cafés of these places is often on glass dishes, the latter being washed with the café crockery.

The following table shows a summary of the work done during the year.

Number of premises registered for the manufacture and sale of ice cream	20
Number of premises registered for the sale of ice cream	64
Number of visits paid to premises	1,578
" " contraventions found on premises ..	139
" " premises refused registration.. ..	6
" " " voluntarily closed	6
" " persons found manufacturing on unregistered premises	13
" " samples of ice-cream taken for bacteriological examination	12
" " samples of ice-cream taken for biological examination	1

Fertilisers and Feeding Stuffs Act, 1926.—During the year 73 samples were taken under the above-mentioned Act and submitted to the City Analyst for examination. Of this number 46 were samples of Feeding Stuffs and 27 Fertilisers.

Slight deficiencies have been found in a few of the declarations made when samples were taken, but when the attention of the vendors was called to the matter the necessary adjustments were made.

Flaked maize samples have perhaps given the most trouble during the year in that the oil content has been found deficient. On investigation this has been found to be due to the depreciation of the material in the time which elapses between the farmer receiving the material and its consumption, and it would appear that the only safe way to sample this material is from bags which have been unopened.

Fertilisers have presented no difficulties except that slight depreciations occur after being compounded and before sale is effected.

I regret to state that farmers continue to take little or no interest in the Act, and the satisfactory standard of the samples submitted for analysis is no doubt due to the keen competition which exists amongst the manufacturers to secure the trade of the farmers.

MUNICIPAL LABORATORY

BY

C. H. MANLEY, M.A., F.I.C., *City Analyst.*

The number of samples of all kinds examined in 1932 was 3,710, of which 1,993 were food and drugs. Analyses have been made during the year for seven Corporation Departments, viz., Public Health, Public Assistance, City Coroner's, City Police, City Engineer's, Waterworks and Highways.

The following is a summary of the analyses made in 1932 :—

Samples taken under the Food and Drugs Act,	
1928	1,993
Samples taken under the Fertilisers and Feedings	
Stuffs Act, 1926	73
Samples taken under the Rag Flock Acts, 1911-1928	6
Special samples analysed for Medical Officer of	
Health	13
Samples analysed for Public Assistance Committee	4
„ „ „ City Coroner	2
„ „ „ City Police	13
„ „ „ City Engineer.. .. .	1
„ „ „ Waterworks Department ..	18
„ „ „ Highways Department ..	1
Atmospheric Pollution { Rain Gauge Analyses ..	60
{ Light Tests	1,522
Consultant work analyses	4
	<hr/>
TOTAL	3,710
	<hr/>

FOOD AND DRUGS.

The table on pages 199 and 200 shews the nature and number of samples taken under the Food and Drugs (Adulteration) Act, 1928, together with the number and percentage of adulterations. The total degree of adulteration was 10·4 per cent. as compared with 8·6 per cent. the corresponding figure for 1931. The degree of adulteration of samples other than milk submitted under the

Act was 3·7 per cent. The variation in these figures during the past five years is shewn herewith :—

	1928.	1929.	1930.	1931.	1932.
Total adulteration	11·2%	12·7%	10·5%	8·6%	10·4%
Adulteration of sam- ples other than milk	5·1%	4·3%	6·9%	5·0%	3·7%

The figures shew that, although the degree of adulteration of samples other than milk was less in 1932 than in any of the preceeding four years, the total degree of adulteration approximated that for 1930, being an appreciable increase on the 1931 figure. The reason for this is dealt with in subsequent paragraphs.

Milk.—Of 1,295 samples 181 (14·0 per cent.) failed to conform to the Sale of Milk Regulations, 1901. It is to be regretted that the steady improvement which had taken place since 1929 has not been maintained :—

	1928.	1929.	1930.	1931.	1932.
Adulteration of Milk	13·5%	15·9%	11·9%	9·9%	14·0%

As a result the percentage adulteration of food and drugs in 1932 shews an increase over the 1931 figure, and the average composition of all milks submitted in 1932, whilst being still of a high order, falls slightly below that of 1931 :—

	1928.	1929.	1930.	1931.	1932.
Non-fatty solids	8·72%	8·77%	8·84%	8·85%	8·82%
Fat	3·73%	3·61%	3·68%	3·71%	3·64%
Total solids ..	12·45%	12·38%	12·52%	12·56%	12·46%

Of the 181 samples below standard 58 shewed added water, 101 were deficient in fat, 14 shewed both added water and fat deficiency, two contained formalin, one contained formalin and was fat deficient, three contained annatto, and two contained annatto and added water.

Shortage of fat thus accounted for the greatest number of milks failing to comply with the regulations, and with the exception of the year 1928 this has been the case each year during the period 1928-1932 under review.

The greatest amount of added water indicated was 15·1 per cent. and the greatest fat deficiency 37·0 per cent. The formalin and annatto cases were the first met with during the past five years. The addition of formalin to milk is contrary to the Public Health (Preservatives, etc., in Food) Regulations, 1925-27, besides which the use of such a liquid as a cleansing agent for milk cans is also expressly forbidden by the Milk and Dairies Order, 1926. The addition of any colouring matter to milk intended for sale is forbidden by the Milk and Dairies Amendment Act, 1922. The presence of annatto helps to mask the poorness of a low quality milk.

Prosecutions were successfully instituted against the principal offenders concerned in each of these cases. Summaries of these and other prosecutions are recorded in the table on pages 201 and 202.

The Freezing Point of Milk.—During 1932 the Hortvet method of determining the freezing point of milk has been adopted with a view to obtaining conclusive evidence (or otherwise) of the presence of added water in samples submitted for analysis. The following is a brief description of the method :—

Data accumulated during the past 30 years have revealed that the fluid pressure of the blood and milk within the body cells of the cow (osmotic pressure) tends to remain constant. It has also been found that the freezing point of these fluids, which is an indirect measure of the osmotic pressure, takes place within a comparatively narrow range, viz., -0.530°C to -0.560°C , and that this holds for rich and poor milk alike so long as it remains fresh and unwatered. The freezing point method, which is official in the U.S.A., Holland and New Zealand, has been finding increasing favour amongst public analysts in this Country during the past three years chiefly owing to the convenient form of apparatus and thermometer introduced by Hortvet of America in 1921. A freezing point of -0.545°C may be regarded as an average figure for a genuine milk, but no milk is condemned as containing extraneous water unless its freezing point rises above -0.530°C . (Dilution of a milk with water brings the freezing point nearer to that of pure water). The method has already been successfully applied in court proceedings in Leeds and expert evidence given thereon. Usually it reveals that considerably more water has been added to the original milk than calculations based on the legal minimum of 8·5 per cent. non-fatty solids would suggest. On the other hand a freezing point determination prevents the condemnation of a genuine sample of milk which is naturally deficient in non-fatty solids. That this is possible is due to the fact that a deficiency in milk-sugar (lactose) is partly counter-balanced by a slight increase in mineral salts, which weight for weight exert a much higher osmotic pressure than lactose.

The following table gives a few illustrative figures out of a number :—

	Lab No. of Milk Samples.	Non- fatty Solids.	Freezing point.	Added Water.	
				By N.F.S.	By F.P.
Appeal-to-Cow samples following 73 to 83	73	6.90%	-0.427°	21.0%	21.4%
	79	7.04%	-0.450°	19.5%	17.1%
	80	8.28%	-0.503°	5.3%	7.4%
	82	7.17%	-0.435°	18.0%	19.9%
	83	6.58%	-0.402°	24.7%	26.0%
	84	8.72%	-0.542°	..	..
	85	8.65%	-0.542°	..	..
	86	8.85%	-0.545°	..	..
	Average of— 84, 85, 86	8.74%	-0.543°	..	..
Other samples milked under Inspectors' Supervision	92	8.82%	-0.534°	..	..
	93	8.78%	-0.538°	..	..
	124	8.39%	-0.545°	..	..
	125	8.50%	-0.552°	..	..
	126	8.52%	-0.552°	..	..
	127	8.47%	-0.553°	..	..

It should be noted that Nos. 124 and 127 (known genuine samples) although both containing less than 8.5 per cent. non-fatty solids both possess normal freezing points, the values being actually greater than those for Nos. 92 and 93, the non-fatty solids of which are well above the regulation limit. A further value of the test lies in the fact that it is now possible to take proceedings in respect of added water under section 4 (1) of the Milk and Dairies (Amendment) Act, 1922, which forbids amongst other things the addition of water to milk intended for sale, and the sale of any milk to which any such addition has been made. A prosecution might therefore well be taken in respect of a milk to which 6 per cent. of water had actually been added, but which might only indicate 3 per cent. when calculated on the 8.5 per cent. regulation limit. Such a prosecution was successfully carried through recently at Reigate in respect of two milk samples containing at least 7 per cent. and 9 per cent. added water (Ross. v. Flux.).

It should be pointed out that a determination of the freezing point does not enable us to distinguish between a milk which has been partly skimmed and one which is naturally poor in fat.

The plea of day to day variation in the composition of milk on account of change of feed and other causes has not infrequently been put forward as a defence, even where an appeal-to-cow sample has been taken from a corresponding milking the day after an alleged offence of watering has occurred. This plea on occasion has been strengthened in court by the production of the pamphlet, "Variations in the Composition of Milk,"

published by the Ministry of Agriculture and Fisheries in 1929. The freezing point invariably affords an effective confirmation of the evidence furnished by the analysis of the appeal-to-cow sample.

Cream.—Of 24 samples two (8·4 per cent.) contained 0·02 per cent. and 0·005 per cent. boric acid respectively.

In the first case (No. 885c) an explanation was asked for and subsequently received and accepted. It appears that the firm in question during the winter season purchases large quantities of cream from outside sources as its own supplies are inadequate, and it was apparently a sample from one of these sources that was adulterated. Informal samples of all the cream purchased by the firm were therefore taken, and all except one (No. 923 C.) containing 0·005 per cent. boric acid were found genuine. No further action was taken as deliveries from this source have been discontinued.

Condensed and Dried Milk.—Nine samples of the former and 10 of the latter were taken by the Inspectors under the 1923 Regulations and found to comply with requirements both as to composition and labelling.

Butter.—All the 32 samples submitted were satisfactory.

Margarine.—Of 31 samples one (3·2 per cent.) contained 16·68 per cent. water instead of a maximum of 16·00 per cent. No action was taken.

Baking Powder.—Of 51 samples six (11·8 per cent.) were returned as of unsatisfactory quality.

Of these two contained only 1·5 per cent. and 3·7 per cent. available carbon dioxide respectively. As a good baking powder contains at least 8 per cent. available carbon dioxide, proceedings were instituted. In the first case the retailer was fined 40/- including costs. In the second instance the case was dismissed on the retailer producing a warranty from the manufacturers. The remaining four samples contained 1/50th, 1/60th, 1/50th and 1/50th grain arsenic per lb. respectively. The first was an official sample bought at a multiple stores. The second and third were informal samples taken from the same shop as the first after the manager had been acquainted with the result of the analysis. The

fourth was from another branch shop owned by the same firm. The manufacturers have been communicated with and at the time of writing this report their answer is being awaited.

Black Beer.—Of seven samples four (57·1 per cent.) contained arsenic in excess of the recognised maximum amount of 1/100 grain per gallon. The first of these was an informal sample taken in connection with the two shop samples mentioned in the last report. It contained 1/40th grain per gallon of arsenious oxide. A further sample taken from the same source proved satisfactory.

The remaining three samples (all official) each contained 1/70th grain per gallon of arsenious oxide, and were taken at the request of the Ministry of Health. They represent the only two brands of black beer brewed in the City. Later samples proved quite satisfactory.

The manufacturers consider that black beer should be placed in a special category as regards permitted arsenic content, just as it has received special consideration for taxation purposes.

As each gallon contains the equivalent of approximately 10 lbs. of malt, the difficulty of keeping the arsenic content below 1/100th grain per gallon is readily appreciated. But for the fact that, according to a brewing expert, an appreciable proportion of the arsenic is removed by the yeast during fermentation, only samples brewed from malt containing 1/1000th of grain (and less) per lb. of arsenic would conform to the recognised standard. The brewer's difficulty is not lessened by the fact that very little kiln dried malt is available, the bulk of it being dried by exposure to the direct heat of the coke fire.

Pearl Barley.—Of 15 samples three (20·0 per cent.) were adulterated. One contained 10 parts and another 30 parts sulphur dioxide per million and 0·75 per cent. cornflour facing, whilst the third contained 1·5 per cent. rice facing. In the first two cases the manufacturers and retailers respectively were warned.

Potted Meat.—Of 13 samples two (15·4 per cent.) were returned as adulterated. One contained 25·0 per cent. starch paste. In view of the successful institution of proceedings in respect of the potted salmon case in May, 1931, proceedings were taken in this case also. The case, after a preliminary hearing, was adjourned *sine die* for further evidence to be brought forward by the prosecution, and no further action has yet been taken.

Six samples of Potted Beef taken during the year were all free from starch.

Sausages.—Of 37 samples one (2·7 per cent.) contained 970 parts per million of sulphur dioxide preservative without declaration of the fact at the time of sale, or more than twice as much as is permitted by the Public Health (Preservatives, etc., in Food) Regulations 1925–27 even in sausages declared to contain preservative when exposed or offered for sale. The vendor was warned by letter.

Sweets.—Of four samples two (50·0 per cent.) contained excess of sulphur dioxide preservative, viz., 650 and 600 parts per million respectively instead of a maximum of 200. The second of these, No. 665 S., was a repeat sample of the first, of which there was insufficient for the full chemical analysis. Examination proved that the sweets (gooseberries) contained 59 per cent. cane sugar, 36 per cent. glucose, and 5 per cent. water, flavouring, etc. As the respective amounts of preservative allowed in cane sugar and glucose are 70 and 450 parts per million, 200 represents the maximum that should be present in sweets of the above composition.

The retailer concerned was warned by letter, a copy of which was sent to the wholesaler.

Compound Bismuth Lozenges.—Of nine samples two (22·2 per cent.) failed to conform to the B.P. Standard.

No. 294 S. was deficient in bismuth oxycarbonate, magnesium carbonate, and calcium carbonate to the extent of 33·3 per cent., 33·3 per cent. and 13·3 per cent. respectively. No. 675 S. was deficient in bismuth oxycarbonate and calcium carbonate to the extent of 13·3 per cent. and 20·0 per cent. respectively. This sample apparently originated from the same source as No. 294 S. The manufacturers on being asked for an explanation sought to explain the deficiencies by stating that excess of sugar excipient had been used in the preparation of the lozenges.

As this would have lowered equally the percentage of all the three constituents in question, it would appear that this explanation is an unsatisfactory one and that little or no analytical control had been exercised during the course of manufacture. A subsequent sample proved of satisfactory composition,

Each compound Bismuth Lozenge is required to contain 0.15 gram bismuth oxycarbonate, 0.15 gram magnesium carbonate and 0.30 gram calcium carbonate.

Prescribed Medicine.—Of six informal samples, one (16.7 per cent.) failed to conform to the requirements of the prescription both as to the amount dispensed and the quantity of one of the components. An explanation was given by the pharmacist concerned and accepted.

Sweet Spirit of Nitre.—Of two samples one (50.0 per cent.) contained only 1.15 per cent. of ethyl nitrite instead of a minimum of 1.25 per cent. (8 per cent. deficiency).

The retailer concerned was ordered to pay the costs of the court proceedings.

FERTILISERS AND FEEDING STUFFS AND OTHER ANALYSES.

Fertilisers and Feeding Stuffs.—Of 73 samples taken under the 1926 Act, three fertilisers and three feeding stuffs failed to conform to the warranties.

The fertilisers in question were:—Lawn fertiliser No. 22 which contained 11.6 per cent. ferrous sulphate and 1.8 per cent. potash instead of the guaranteed amounts of 21.0 per cent. and 2.2 per cent. respectively. Complete Fertiliser No. 23 which contained 13.9 per cent. potash instead of 15.0 per cent. guaranteed; and Dried Blood No. 37 which contained 11.35 per cent. nitrogen instead of 12.35 per cent. guaranteed.

The feeding stuffs were Dairy Meal No. 34, which contained 14.2 per cent. fibre instead of a maximum of 11.0 per cent. (29 per cent. excess); Ground Oats No. 48, which contained about 5 per cent. barley meal and pea meal, and Kositos (flaked maize) No. 65, which contained only 2.25 per cent. oil and 8.7 per cent. proteins instead of the guaranteed amounts of 3.0 per cent. and 10 per cent. respectively. A subsequent sample No. 69 of Kositos proved satisfactory.

Rag Flocks.—All the samples (six) taken under the 1911 and 1928 Acts conformed with the regulations and contained less than 30 parts of chlorine per 100,000. This is the third year in succession that this has taken place, and seems to be an indication both of the value of systematic inspection and of the desire of Leeds rag flock manufacturers to market a clean product.

Public Assistance Committee.—Samples of four soaps supplied to the various Institutions within the City were analysed and reported upon.

City Coroner.—Certain organs (two) were examined in a case of suspected death from lead poisoning. The amount of lead found was considered insufficient to have been a contributory cause of death.

City Police.—Thirteen analyses of widely differing character were carried out, these including investigations concerning counterfeit coinage; a proprietary wine sold without a wine and spirit licence and claiming to contain hypophosphites, which were actually absent; a disinfectant liquor; a bottle of chloroform; sawdust from stolen safes; and cloudy ammonia containing more than 5 per cent. free ammonia and sold without a poison label.

Waterworks Department.—The monthly analyses of the City Water supply have been continued, and analyses made of various other drinking waters submitted by the Waterworks Manager.

Atmospheric Pollution.—The monthly analyses of the five rain gauges in the City have been continued along with the daily light tests, the data obtained being recorded on pages 230 and 231 respectively.

Analyses of Dust.—At a recent conference in Newcastle, Dr. J. T. Dunn, the City Analyst, is understood to have said that he had found appreciable amounts of arsenic and lead in the City dust. In view of the toxic nature of these elements it was decided to examine samples of dust from six different parts of Leeds. The accompanying table summarises the results obtained :—

	Arsenic (Oxide).		Lead.		Copper.	
	per cent.	Ppm.	per cent.	Ppm.	per cent.	Ppm.
No. 1. Clock Chamber, Leeds Town Hall	0·013	130	0·05	500	0·06	600
No. 2. Turret Floor, Market Buildings	0·035	350	0·46	4,600	0·15	1,500
No. 3. Bell Tower Floor Christ Church, Meadow Lane ..	0·012	120	1·50	15,000	0·72	7,200
No. 4. Disused Office, South Accommo- dation Road ..	0·018	180	0·44	4,400	0·05	500
No. 5. Tower Floor, Harehills Congre- gational Church ..	0·020	200	0·02	200	0·03	300
No. 6. Belfry, Whitkirk Church	0·004	40	0·004	40	0·01	100

Ppm = parts per million.

It is evident that the amounts of arsenic, lead, and copper which can occur in and near the centre of an industrial city are quite appreciable. As was expected, the smallest amounts of all three were found on the extreme outskirts, as represented by Whitkirk. Again, at Harehills, about two miles out, the lead and copper contents were less than those in and about the centre of the City, the sieved floor dust from the bell-tower of Christ Church, Meadow Lane, being the most highly contaminated. On the other hand the arsenic content of the latter was actually less than that at Harehills.

It may be that the lighter particles of white arsenic are carried much further by the wind than the heavier lead and copper.

The arsenic is a product of the combustion of coal and coke and of smelting operations.

The lead and copper are likely to be disseminated into the air as a result of various industrial processes which are accompanied by the production of the dust of these metals. They may also find their way into the air from the combustion of low grade coals.

In conclusion I wish to express my thanks to my Assistant and Deputy, Mr. R. W. Sutton, B.Sc., F.I.C., recently appointed Derby County Analyst, and to Mr. W. Lee for their valued services and loyal co-operation during the past five years.

FOOD AND DRUGS (ADULTERATION) ACT, 1928. SAMPLES SUBMITTED
TO THE CITY ANALYST DURING 1932.

Article.	No. examined.			No. adulterated.			Per-centage adultera-tion.
	Formal	Informal	Total	Formal	Informal	Total	
Baking Powder	48	3	51	3	3	6	11·8
*Beer	21	..	21	..	..	..	..
*Beef Spreading	1	..	1	..	..	..	..
Bicarbonate of Soda ..	8	..	8	..	..	..	..
Bismuth Lozenges	8	1	9	2	..	2	22·2
Black Beer	4	3	7	3	1	4	57·1
Boric Ointment	2	..	2	..	..	..	..
*Brawn	1	..	1	..	..	..	..
*Butter	27	5	32	..	..	..	..
Cheese	2	..	2	..	..	..	..
Cocoa	15	..	15	..	..	..	..
Cod Liver Oil	4	..	4	..	..	..	..
Coffee	20	..	20	..	..	..	..
Coffee French	5	..	5	..	..	..	..
Condensed Milk	9	..	9	..	..	..	..
*Cordials	12	..	12	..	..	..	..
*Cornflour	2	..	2	..	..	..	..
*Cream	18	6	24	1	1	2	8·4
*Cream Buns	1	..	1	..	..	..	..
Cream of Tartar	6	..	6	..	..	..	..
Custard Powder	4	..	4	..	..	..	..
Dried Milk .. ..	..	10	10	..	..	..	..
Epsom Salts	8	..	8	..	..	..	..
*Flour	13	..	13	..	..	..	..
*Flour Self Raising ..	7	..	7	..	..	..	..
Golden Syrup	1	..	1	..	..	..	..
Ground Almonds	5	..	5	..	..	..	..
Ground Ginger	6	..	6	..	..	..	..
Health Salts	4	..	4	..	..	..	..
*Jam	2	..	2	..	..	..	..
*Jellies	10	..	10	..	..	..	..
*Kent Ale	1	..	1	..	..	..	..
*Lard	33	..	33	..	..	..	..
Lard Compound	1	..	1	..	..	..	..
Lemonade	3	..	3	..	..	..	..
Lemon Crysals	5	..	5	..	..	..	..
Carried forward ..	317	28	345	9	5	14	..

* Tested for preservative.

FOOD AND DRUGS (ADULTERATION) ACT, 1928. SAMPLES SUBMITTED
TO THE CITY ANALYST DURING 1932—Continued.

Article.	No. examined.			No. adulterated.			Per-centage adulteration.
	Formal	Informal	Total	Formal	Informal	Total	
Brought forward ..	317	28	345	9	5	14	..
*Margarine	31	..	31	1	..	1	3.2
*Milk	1,227	68	1,295	169	12	181	14.0
*Milk, Skimmed	2	..	2	1	..	1	50.0
*Minced Beef	1	..	1	..	..	..	..
Oatmeal	12	..	12	..	..	..	..
Olive Oil	12	..	12	..	..	..	..
Oxade	1	..	1	..	..	..	..
Paraffin-Liquid	5	..	5	..	..	..	..
*Pearl Barley	14	1	15	3	..	3	20.0
*Peas	11	..	11	..	..	..	..
Pepper	20	..	20	..	..	..	..
*Polony	12	..	12	..	..	..	..
*Potted Beef	3	3	6	..	..	..	..
*Potted Meat	13	..	13	2	..	2	15.4
Prescribed Medicine .. ..	..	6	6	..	1	1	16.7
Raspberry Crystals	1	..	1	..	..	..	..
Rice	29	..	29	..	..	..	..
Rum	4	..	4	..	..	..	..
*Sausages	37	..	37	1	..	1	2.7
Shredded Suet	4	..	4	..	..	..	..
Soda Cream	1	..	1	..	..	..	..
*Sponge Cakes	1	..	1	..	..	..	..
*Sugar	28	..	28	..	..	..	..
Sugar Demarara	7	..	7	..	..	..	..
Sulphur—Flowers of	1	..	1	..	..	..	..
*Sultanas	5	..	5	..	..	..	..
*Sweets	4	..	4	2	..	2	50.0
Sweet Spirit of Nitre	2	..	2	1	..	1	50.0
Tapioca	7	..	7	..	..	..	..
Tea	42	..	42	..	..	..	..
*Vinegar	11	..	11	..	..	..	..
*Vinegar Malt	6	..	6	..	..	..	..
Whisky	16	..	16	..	..	..	..
Total	1,887	106	1,993	189	18	207	10.4

* Tested for preservative.

SUMMONSES ISSUED DURING 1932 UNDER THE FOOD AND DRUGS
(ADULTERATION) ACT 1928.

No. of Sample	Article.	Adulteration or Offence.	Fines. £ s. d.	Remarks.
48s	Potted Meat	25.0% of starch paste ..	..	Adjourned <i>sine die</i> .
126c	} Milk ..	5.1% of added water ..	..	Dismissed under the Probation of Offenders Act on payment of 40/- costs (20/- in each case); producer.
127c		3.3% of added water ..	..
196c	} Milk ..	8.9% of added water ..	..	Dismissed; producer.
199c		11.3% of added water ..	..	Dismissed; producer.
201c		6.4% of added water ..	..	Dismissed; producer.
247c	} Milk ..	11.0% deficient in fat ..	2 0 0	Producer.
250c		15.0% deficient in fat ..	2 0 0	Producer
268c	Milk ..	4.7% of added water and contains added colouring matter	1 0 0	Ordered to pay costs; retailer.
269c	Milk ..	Contains added colouring matter	..	Ordered to pay costs; retailer.
301c	Milk ..	11.2% of added water and 9.0% deficient in fat	5 0 0	To pay costs; producer.
249s	Baking Powder	Very inferior quality as it contains 1.5% of available CO ₂ and good baking powder should contain at least 8.0%	2 0 0	To pay costs; retailer.
310c	Milk ..	37.0% deficient in fat ..	2 0 0	Retailers.
332c	Vinegar	6.5% deficient in acetic acid	1 0 0	Retailer.
348s	Milk ..	0.9% of added water and contains added colouring matter	..	Ordered to pay 14/6 costs; retailer.
359s	Milk ..	13.0% deficient in fat ..	..	Adjourned <i>sine die</i> .
383s	} Milk ..	32.0% deficient in fat ..	..	Dismissed under the Probation of Offenders Act on payment of costs; producer.
384s		14.0% deficient in fat ..	..
386s		11.0% deficient in fat ..	..
389c	} Milk ..	10.6% of added water ..	1 0 0	To pay costs in each case; producer.
390c		7.4% of added water ..	1 0 0	
377s	Milk ..	14.0% deficient in fat ..	..	Adjourned <i>sine die</i> .

SUMMONSES ISSUED DURING 1932 UNDER THE FOOD AND DRUGS
(ADULTERATION) ACT 1928—Continued.

No. of Sample	Article.	Adulteration or Offence.	Fines.			Remarks
			£	s.	d.	
601c	Milk ..	12.0% deficient in fat ..	1	10	0	To pay costs ; producer.
602c	Milk ..	12.0% deficient in fat ..	..			Dismissed on production of warranty. Wholesale and Retail firm of dairymen.
635c	Milk ..	Contains formaldehyde to the extent of 1 part per million	2	0	0	Retailers.
638c	} Milk ..	35.0% deficient in fat ..	..			Dismissed under the Probation of Offenders Act on payment of costs ; retailer.
656c		6.1% added water ..	..		
640c	Milk ..	13.0% deficient in fat and contains formaldehyde to the extent of 1 part per 150,000	2	0	0	Including costs ; wholesaler.
657c	Milk ..	14.0% deficient in fat ..	5	0	0	To pay costs ; wholesaler.
648c	} Milk ..	15.0% deficient in fat and 5.9% of added water	..			To pay costs ; retailer.
658c		6.5% of added water ..	..			To pay costs ; retailer.
674c	Milk ..	20.0% deficient in fat ..	1	0	0	To pay costs ; retailer.
698c	Milk ..	15.0% deficient in fat ..	..			To pay 14/6 costs ; retailer.
696L	Milk ..	6.8% of added water ..	1	0	0	To pay costs ; retailer.
714L	Milk ..	10.0% of added water ..	..			Dismissed ; producer.
736s	Baking Powder	Contains only 3.7% of available carbon dioxide	..			Dismissed on production of warranty from manufacturers ; retailer.
782L	} Milk ..	12.6% of added water and 10.0% deficient in fat	1	0	0	} To pay 17/6 costs in each case ; producer.
783L		13.4% of added water and 17.0% deficient in fat	1	0	0	
862L	Milk ..	15.1% of added water ..	..			Dismissed under the Probation of Offenders Act on payment of 25/- costs ; retailer.
883c	Milk ..	13.0% deficient in fat ..	..			To pay costs ; retailer.
980c	Milk ..	6.0% of added water ..	..			To pay costs ; retailer.
1006c	Sweet Spirits of Nitre	8.0% deficient in ethyl nitrite	..			To pay 25/- costs ; shopkeeper.

Sanitary Circumstances.

SANITARY CIRCUMSTANCES

BY

E. ASHWORTH UNDERWOOD, M.A., B.Sc., M.B., D.P.H., *Chief Assistant Medical Officer of Health and Chief Sanitary Inspector.*

Rivers and Streams.—Close co-operation continued to be maintained between the Health Department and the West Riding Rivers Board, which administers the powers conferred by the Rivers Pollution Prevention Act, 1876, in respect of the Leeds area. During the year an abatement of pollution was secured on 28 occasions.

Water.—Mr. H. Shortreed, the Waterworks Manager, has kindly furnished me with the following particulars regarding the water supply of the city during 1932.

The rainfall in the Washburn Drainage Area for the year ended 31st December, 1932, was 33·7 inches, as compared with 43·84 inches in the year 1931, and an ample supply of water was available throughout the whole of the year.

During the year 23,178 yards of new distribution mains of from 3 inches to 10 inches in diameter were laid, and 3,141 yards of old mains were replaced by new ones of not less than 3 inches in diameter.

The total consumption of water for the year ended 31st December, 1932, was 6,548 million gallons, equal to an average daily consumption of 17·89 million gallons, as compared with a daily average of 17·62 million gallons during the previous year. The daily average consumption for domestic purposes was approximately 24 gallons per head.

The regular monthly analyses (chemical and bacteriological) indicate a high standard of purity.

Sewage Disposal.—Further progress has been made during the year towards the completion of the Thorpe Stapleton Main Sewage Disposal Works, which are situated about three miles

from the centre of the city in a South-Easterly direction. The lime mixing house has been built, and the plant has been installed and put into commission.

The next important unit to be commenced is the sludge press house in which a modern sludge pressing plant will be installed. This will replace the existing plant which has been in operation for nearly a quarter of a century.

The sewage of the city receives treatment which is at present very satisfactory, but which will be still further improved on the completion of the Works.

The Rodley Sewage Works function efficiently and are up to date. No extensions or alterations have been carried out during the year.

I have to thank Mr. E. H. Howatson, the Sewerage Engineer, for the above information.

Drainage and Sewerage.—Five hundred yards of additional branch sewers were constructed during the year. This enabled 21 cesspools to be abolished and the drains of 24 houses to be connected to the sewer. Thanks are due to officials of the City Engineer's Department for their willing co-operation and courteous consideration of all requests made to them.

Closet Accommodation.—During the year the Corporation continued the scheme of giving financial assistance to property owners in approved cases towards the cost of converting trough-closets into modern pedestal water-closets, and 431 trough-closets were converted. The total contribution of the Corporation amounted to £2,962 5s. od., the average cost per closet being £8 os. 3d., as compared with £8 6s. od during 1931. On December 31st, 1932, there remained in the city 1,158 trough-closets, of which, owing to various circumstances, about 1,060 are incapable of being converted.

Fifty-two privies were replaced by modern water-closets during the year.

The position with regard to the various types of sanitary conveniences in the city at the end of the year was as follows:—Privies 248; pail-closets 205; trough-closets 1,158; cistern water-closets approximately 115,400. There were also 375 cesspools.

TABLE SHEWING NUMBERS OF TROUGH CLOSETS, PRIVIES
AND PAIL CLOSETS IN THE CITY DURING THE LAST
TWENTY-EIGHT YEARS.

Year.	Trough Closets.	Privies.	Pail Closets.
1905	10,507	1,669	231
1906	10,461	1,193	229
1907	10,424	963	228
1908	10,410	875	202
1909	10,120	851	198
1910	10,047	821	165
1911	9,963	785	164
*1912	9,934	1,284	221
1913	9,790	1,269	217
1914	9,760	1,211	207
1915	9,738	1,047	188
1916	9,725	1,026	185
1917	9,723	1,023	169
1918	9,693	1,022	166
1919	9,655	1,014	166
†1920	9,594	1,051	155
1921	9,521	900	128
1922	9,324	651	111
1923	9,256	558	102
1924	8,781	472	101
1925	8,222	332	94
‡1926	7,685	332	219
1927	6,447	294	197
§1928	4,440	435	267
1929	3,647	360	256
1930	2,772	322	230
1931	1,589	300	227
1932	1,158	248	205

*Roundhay, Seacroft, Shadwell and Crossgates were added to the city in this year. In this area there were 502 privies and 61 pail closets.

†Middleton was absorbed in this year. In this area there were 148 privies.

‡Portion of Adel was added to the city in this year. In this area there were 65 privies and 136 pail closets.

§Eccup, Alwoodley, Templenewsam and Austhorpe were added to the city in this year. In these areas there were 192 privies and 106 pail closets.

||This is a corrected figure obtained as a result of a recent census.

The existing privies and pail-closets are almost entirely in rural districts where no sewer is available.

Progress in trough-closet conversion has been rapid and the time is near when all the trough-closets which are convertible will have been dealt with. It should be noted that projected schemes of slum clearance when they materialise will effect a further reduction in the number of trough-closets still remaining to be converted.

The position with regard to cesspools is not so satisfactory. In the majority of these cases no sewer is available, and in many cases where a sewer is reasonably close to the cesspool, the owners are unwilling to incur the expense of conversion of what may appear to them a satisfactory system of drainage. Nevertheless, there are two fundamental objections to the continuance of this system: (1) the offensive smells, which often give rise to bitter complaints from neighbouring residents when the cesspools are being emptied; and (2) the relatively high cost of emptying. In some cases the estimated cost of conversion is actually less than the annual cost of cleansing. This matter is at present engaging the attention of both the Health and the Cleansing Committees.

Cleansing.—I am indebted to Mr. S. Thornley, the Cleansing Superintendent, for the following information. Household refuse, collected by the Cleansing Department during 1932, amounted to 176,787 tons, of which 95,498 tons were dealt with at the destructors, and 81,289 tons were disposed of at controlled tips and for agricultural purposes.

Ashpits and Ashbins.—During the year 437 ashpits were abolished. On December 31st, 1932, there still remained in the city 537 sunken ashpits and 5,791 other types.

The inspectors have paid particular attention to the dangers arising from dilapidated and misused ashbins, and in response to representations from the Department, 4,363 metal ashbins were provided. Of this number 192 were supplied by the Corporation in default, and the cost recovered from the owners through the usual channels.

Public Conveniences.—The public convenience in **Briggate** has been a matter for concern for many years. The position of the entrance is to say the least unfortunate, and efforts have been made from time to time to find a more suitable site. A reconstruction scheme, however, has been approved and the work put

in hand. It is hoped that the work will be completed about the end of May or the early part of June, 1933. The leading advantage to be gained from this scheme is that the entrance to the convenience will be placed at the opposite end at a point some distance from the Boar Lane junction. Viewed in the light of traffic considerations alone, this alteration in the situation of the entrance will be an undoubted improvement.

The question of providing a public convenience at the **Lawnswood** tram terminus has for some time been considered. In this connection a scheme has been approved providing for accommodation for both sexes, and at the time of writing the work is completed and the convenience is in commission. There is no doubt that, in view of the large numbers of people who congregate in this district, this convenience is meeting a definite public need.

Reference was made in a previous report to the proposal to erect a convenience for both sexes at the junction of **Woodhouse Lane** and **The Headrow**. Owing to various difficulties this proposal was abandoned during the year 1932.

Flushing.—In the report for 1931 reference was made to the transfer of the flushing services from the Cleansing to the Health Department, and to the purchase of two motor vehicles for these purposes. It was anticipated that this transfer would lead to certain economies and would give a more efficient service. The work of the past year has entirely justified the change.

Section 17, Housing Act, 1930.—Full use was made of the powers conferred by this Section, and the following table sets forth clearly comparative figures of the work done during the past four years :—

	1929.	1930.	1931.	1932.
Number of houses where defects were found	1,050	1,759	2,046	1,875
„ „ houses at which defects were remedied.. ..	870	1,632	1,950	2,012
„ „ informal notices served ..	1,050	1,741	1,865	1,256
„ „ statutory notices served ..	180	481	716	756

In connection with the administration of this Section it is gratifying to be able to record that in only three cases had the work to be carried out by the Department in default.

Leeds Corporation Act, 1927, Section 95.—By the provisions contained in this Section power is given to remove aged and infirm persons to a suitable institution. From time to time reports are made to the Department of old people who live alone in a neglected and helpless state. When such persons are willing to accept institutional treatment they are easily dealt with by the Public Assistance Authorities. Unfortunately, however, in some instances these old persons will not consent to enter an institution, and, if they adhere to their decision the powers of this Section have to be invoked in order to effect their compulsory removal. Before the somewhat involved procedure of the Section is followed, every effort is made to persuade these old people to enter the institution voluntarily; but in a refractory case, in the interest of the person concerned and on humanitarian grounds, compulsory removal is the only possible course to pursue.

Persuasion has been almost invariably successful, and during the past year it was necessary to apply the powers of the Section and obtain a removal order on one occasion only.

It is unfortunate that a compulsory removal order remains in force for only three months, since at the end of that short period the somewhat complicated procedure of the Section has to be repeated.

Offensive Trades.—Below is a table showing the nature and number of scheduled offensive trades which were being carried on in the city at the end of the year:—

OFFENSIVE TRADES.

Nature of Trade.					Number of each Trade.
Bone Boiler	..	..	..	..	5
Fellmonger	..	..	..	..	2
Fat Melter	..	..	..	..	10
Glue Maker	..	..	..	..	1
Gut Scraper	..	..	..	..	4
Leather Dresser	..	..	..	..	23
Rag and Bone Dealer	..	..	..	..	32
Size Maker	..	..	..	..	3
Soap Boiler	..	..	..	..	5
Tanner	..	..	..	..	16
Tripe Boiler	..	..	..	..	12
Fish Frier	..	..	..	..	539
Total	..	..	..	..	652

During the year 3,531 visits of inspection were made to premises in which offensive trades were carried on or in respect of which applications had been received for permission to establish such trades, as compared with 3,169 in 1931.

Fish Frying.—During the year 14 applications were received for permission to establish the offensive trade of a fish frier. Of these six were rejected.

The policy of the Department limiting consent to one year only, and renewable thereafter subject to the satisfactory conduct of the business, has been continued and has been justified by results.

During the year an important departure was introduced in connection with existing fried fish shops. Many of these shops were in such an unsatisfactory condition in respect of surfaces of walls, ceilings, floors, counters, etc., that they were unsuitable for the cooking and sale of food, and there was a very marked contrast between these shops and new premises which had recently been opened under current regulations. A schedule of requirements was therefore compiled. These requirements dealt with suitable materials for walls, ceilings, floors, and the surfaces of counters, and the condition of preparation-rooms. The response to these representations made to the individual fish friers has been excellent and during the last three months of the year 81 shops have been put into a highly satisfactory condition. There is every reason to assume that within a comparatively short period all the fried fish shops in Leeds will be thoroughly modernised.

District Sanitary Inspection.—Routine sanitary inspection has continued as in previous years and the amount of this work done during 1932 will be seen on reference to the tables on pages 211 and 212.

The number of preliminary notices served during the year for the abatement of nuisances was 7,887, and the number of statutory notices 2,752. Of the latter 2,497 have been effective and 255 were outstanding at the year end. In five cases only were legal proceedings necessary.

In connection with common lodging-houses, houses-let-in-lodgings, etc., there were served during the year 456 preliminary notices and 205 statutory notices.

ANALYSIS OF WORK DONE BY DISTRICT INSPECTORS—1932—contd.

	EASTERN DIVISION.	WESTERN DIVISION.	CITY TOTALS.
47. Number of informal notices served	4,104	3,783	7,887
48. Number of statutory notices served.. ..	1,433	1,319	2,752
NUISANCE ABATEMENT.			
49. Metal asbbins provided	2,453	1,910	4,363
50. Houses cleansed.. .. .	92	78	170
51. Overcrowded houses dealt with	27	15	42
52. Defective roofs, fallpipes and spouting, &c. repaired	2,308	3,142	5,540
53. Disconnection of house drains	111	214	325
54. Other drainage works	374	386	760
55. Houses provided with proper drains	13	56	69
56. Houses supplied with town's water	13	6	19
57. Privies abolished or converted into water closets	45	7	52
58. Water closets erected { (a) Outside	18	20	38
{ (b) Inside	5	9	14
59. Pail closets abolished or converted into water closets	9	13	22
60. Trough closets converted into water closets ..	277	154	431
61. Trough and water closets repaired	986	1,147	2,133
62. Ashpits abolished { (a) Sunken	22	39	61
{ (b) Other than sunken	169	207	376
63. Houses provided with suitable asbes accom- modation	3,375	3,520	6,895
64. Closets cleansed (limewashed, etc.)	120	183	303
65. Yard surfaces repaired or renewed	216	113	329
66. Stopped drains cleared.. .. .	866	832	1,698
67. Other nuisances remedied	2,215	1,796	4,011
68. Other housing defects remedied	1,985	2,254	4,239
69. Total houses for which above work done ..	11,873	12,998	24,871
70. Offensive accumulations removed	194	129	323
71. New manure pits or metal receptacles provided	27	17	44
72. Manure pits repaired	4	1	5
73. Pollutions of river or streams abated	5	23	28
74. Animals improperly kept removed	34	31	65
75. Offensive urinals dealt with	10	8	18
76. Cesspools filled up	2	23	25
77. Public or private wells abolished	—	—	—
78. Total nuisances and housing defects abated	13,612	14,423	28,035
79. Abated in response to prelim. notices or volun.	10,172	11,207	21,379
80. Abated in response to statutory notices ..	3,440	3,216	6,656
HOUSING ACT, 1930 : SECTION 17.			
81. Number of houses where defects found ..	859	978	1,837
82. Number of houses where defects remedied..	947	1,027	1,974
83. Defects remedied { (a) Prelim. Notices or Volun	524	712	1,236
84. in response to { (b) Statutory Notices ..	423	315	738
85. Number of informal notices served	850	771	1,621
86. Number of statutory notices served.. ..	393	343	736

In addition 288 preliminary notices and 36 statutory notices were served in connection with factories, workshops and workplaces.

It will be seen that the inspection of houses and premises in connection with infectious diseases made heavy claims on the inspectors' time.

Training of Sanitary Inspectors.—Thirteen student sanitary inspectors received training in the Department during the year.

Common Lodging Houses.—Strict supervision of the 26 common lodging-houses in the city has been maintained, and it can be safely claimed that the standard of cleanliness in these is high. No legal proceedings were instituted against any Keeper.

At the end of the year there was available in the city the following common lodging-house accommodation in registered premises :—

For Men	..	..	23 houses, with 1,433 beds
For Women	..	..	3 houses, with 116 beds.

Included in the above are three registered lodging-houses for men, controlled by the Salvation Army and by the Church Army, with a total of 376 beds.

During the year under review the beds in the 23 men's lodging-houses were occupied on 410,205 occasions, the average number of beds vacant per night being 309; the 116 beds in the women's lodging-houses were occupied on 21,966 occasions, the average number of vacant beds nightly being 55.

The table on page 216 sets forth the work carried out in respect of the common lodging-houses during 1932.

Church Crypt used as a Rest Room.—At the end of 1931 it was discovered that the crypt of a church in the city was being used as a "rest room." The main part of the crypt was formed by a large room, which had practically no natural lighting. In this rest room a canteen had been installed. The washing facilities and sanitary conveniences were rather primitive. Any person who applied for assistance and who could show that he was destitute, received an evening meal, was allowed to sleep on the chairs or benches in the rest room during the night, and was given breakfast on the following morning. No charge of any kind was made.

The question arose as to whether or not these premises constituted a common lodging-house, since if they did, the amenities

provided fell far short of the standards which were applied to the other lodging-houses in the city. In view of the rulings in certain cases which had been heard in the civil courts, it was decided that this church crypt did not constitute a common lodging-house, since no charge of any kind was asked or accepted.

Representations regarding the sanitary arrangements and other facilities provided were, however, made to the responsible persons, and these resulted in very satisfactory alterations being effected voluntarily.

Houses-let-in-Lodgings.—The control of this type of house continues to be a difficult problem and frequent inspections are essential.

In the report for 1930 mention was made of the increased number of these houses in the city.

In Leeds, as in other large cities, the “farmers” of these houses-let-in-lodgings have turned their attention from the poorer quarters of the city to the better class districts.

The type of building now being “farmed out” is the large detached or semi-detached house, with ten or more rooms and a basement. In former years these houses were the residences of the wealthier members of the community but owing to their size and situation have fallen from favour and been superseded by the modern villa type of house on the outskirts of the city. Hence many of these large houses have become void and can be bought or rented at small cost. When the house is acquired, the landlord has perforce to install a few additional gas cookers, water-closets and extra sinks, but apart from these measures little is done to make the premises really suitable for human habitation. The rents charged for a single room are usually exorbitant, and few are to be had at less than 8/- per week; generally speaking the rooms are let at from 10/- to 15/- per week.

The results of this policy are two :—(1) These houses are often entirely unsuited for the purpose to which they are put. When they are “discovered” by Inspectors of the Department, the landlords are compelled to carry out the work necessary to make the premises comply with the Byelaws. But the work which is carried-out, though legally unexceptionable, is often performed in such a way as to destroy the value of the building. Even when all the work required has been completed, the house is still far from satisfactory. (2) The influx of a class of person of an undesirable

type into a good-class district immediately lowers the tone of the neighbourhood. The result is a vacation of other houses and a deterioration of surrounding property.

This is the newest way of making slums and certainly one of the surest.

Complaints are frequently received respecting the conduct of the persons inhabiting these farmed out houses, but as a rule the Department is powerless to interfere.

Many of these houses would, if suitably converted, make excellent residential flats and if this course were pursued instead of the one I have described, the landlord would be assured of a reasonable return for his outlay, and the tone of the district would be maintained.

By insisting-upon rigid adherence to the byelaws the conditions in these houses-let-in-lodgings have at least been made tolerable but wider powers of control are required if this growing menace to the Public Health is to be kept in check.

To this end a new byelaw was drafted during the year the effect of which is that, notice of letting must be given within one month from the date on which letting takes place. This byelaw has not yet come into force. When it does become operative it will facilitate the control of such premises, though not so satisfactorily as would have been the case had it been made obligatory for notice to be given before the premises were actually let.

The number of statutory notices served concerning the requirements of the Byelaws was 162, and of these 140 have been complied with.

Details of the work in connection with houses-let-in-lodgings will be found in the table on page 216.

University Lodgings.—The usual procedure has been followed and the lodgings on the register of approved premises for the use of University students were duly inspected and the results reported to the University Authorities. In this connection the following details are given :—

	HOUSES.	ROOMS.
New Lodgings inspected during 1932	83	232
Old lodgings re-inspected	31	82
Drains tested—196 drains in 76 houses		

Total number of visits to the above houses 128.

Details of sanitary defects found and rectified are included in the table under houses-let-in-lodgings.

COMMON LODGING-HOUSES.

Number registered—		
Men's 23 Beds available 1,433 }		
Women's 3 " " 116 }		
Routine visits to all common lodging-houses..	1,004	
Visits as to drain tests and abatements ..	92	
Visits to smallpox contacts .. .. .	..
Visits for infectious disease	13	
Preliminary notices served	52	
Statutory notices served .. .. .	..
Nuisances found and abated :—	FOUND.	ABATED.
Dirty closets	6	5
Dirty rooms	35	35
Dirty bedding	231	227
Defective or stopped drains	5	4
Defective roofs or eaves spouts	14	13
Other nuisances	72	67
Total	363	351

HOUSES-LET-IN-LODGINGS.

	HOUSES.	ROOMS.
Registered during 1932, let as furnished rooms	10	61
On register at end of 1932	122	706
Houses-let-in-lodgings visited though not registered	82	410
Drains tested 116, in 61 houses		
Drains re-tested 34, in 14 houses		
Visits for inspection of nuisance abatement and requirements of byelaws..		
944		
Visits for other causes		
686		
" infectious disease (7 cases) ..		
7		
" additional inspection		
956		
Preliminary notices served	420	
Statutory notices served	204	
Nuisances—	FOUND.	ABATED.
Dirty or bad bedding	9	8
Dirty rooms	160	147
Overcrowding	11	11
Dirty closets	21	19
Other nuisances	537	381
Structural defects	143	123

Residential Flats.—The special inspectors concerned paid 85 visits to the 325 residential flats in the city. The nuisances found and abated are included in the table—houses-let-in-lodgings.

Cellar Dwellings and Underground Sleeping Rooms.—During the year 22 underground sleeping-rooms were found to which 63 visits were paid. Alternative accommodation was found in 20 cases. Action to this end will also be taken with regard to the two remaining cases.

Below are particulars of visits, nuisances found and abated, and notices issued :—

Visits to cellar dwellings	18	
Visits to underground sleeping-rooms ..	63	
Visits on account of nuisance abatement ..	22	
Visits for other causes .. .. .	..
Preliminary notices served	22	
Statutory notices served .. .. .	..
Nuisances :—		
Underground sleeping-rooms	FOUND. 22	ABATED. 20
Other nuisances .. .. .	..	..

Tents and Vans.—During the year nine additional camping grounds were found making in all 33, which were visited. Three camping grounds were reported to Committee under the Leeds Corporation Act, 1930. After receiving notices from the Town Clerk prohibiting the use of these lands, two were closed during the year and the other was discontinued at the end of January, 1933. In addition, after interviews between the Inspectors and the owners or after notices had been served under the byelaws, 18 other camping-grounds were closed. At the end of the year there were 12 camping grounds in the city. With the exception of the camping grounds in Stanningley Road and Brewery yard, none of the sites has more than two vans on the lands, and all are some considerable distance from dwelling-houses.

The following table gives details of the several inspections made :—

Visits to vans (381 vans)	1,136
Visits to tents (25 tents)	217
Visits on account of infectious disease	2
Visits to camping grounds	565
Visits on account of nuisances	163
Camping grounds closed	21
Preliminary notices served	19
Statutory notices served .. .. .	..

Nuisances :—	FOUND.	ABATED.
Dirty camping grounds	1	1
Dirty vans	2	2
Overcrowded vans	2	2
Camping places without sanitary accom- modation	9	9
Tents and vans not habitable	2	2
Other nuisances	37	37

Canal Boats.—The work in connection with the registration and inspection of canal boats has been carried on as in past years.

Details appear in the table appended.

CANAL BOATS.

Registered during the year 1932 .. .. .	..
Re-registered and Transferred to fresh owners .. .. .	..
Re-registered owing to structural alterations .. .. .	..
Struck off register (on revising register) .. .. .	..
Remaining on register at end of year	145
Visits of inspection to wharves and locks	651
Complete inspections of boats	443
Cases of infectious disease .. .. .	..
Cases of overcrowding	2
Dirty cabins	3
Absence of registration certificate	2
Boats not marked with registered number	13
„ not properly ventilated	2
„ requiring painting or repairing	10
„ found to be not registered .. .. .	..
Number of children of school age found on registered boats—6 boats, 9 children	

Sanitation of Schools.—A separate report is issued by the School Medical Officer and this includes particulars relating to the sanitary circumstances of the Leeds Schools.

Rat Suppression.—As in past years the annual Rat Week was held in November when an effort was made to educate the public concerning the dangers to health and the economic wastage occasioned by rats. In addition, a rat film was shown in two cinemas, and thanks to the valuable support given by the Press a good deal of interest was created. The co-operation of the City Engineer's Department was enlisted and special measures were taken against sewer rats. Further, the Cleansing Department carried out a campaign against rats in refuse tips and dumps.

The number of complaints received was 371, as compared with 316 last year, and 226 in 1930. The steady increase in the number of the complaints indicates an increasing appreciation by the public generally of the fact that the Department is able to give advice on the eradication of these pests. The figures do not, of course, give any indication of the extent to which the city is affected. Particulars of the work done during the year under the above Act are as follows :—

Complaints received	..	..	..	..	371
Premises inspected	..	..	..	..	547
Premises cleared	..	..	..	..	224
Rats caught or found poisoned—	..	..	..	..	1,951
Visits for purposes of observation of work in progress	..	..	..	..	894
Visits for other purposes—interviews with owners of infested premises and the like..	..	..	..	..	155
Informal notices served	..	..	..	..	55
Notices complied with	..	..	..	..	40

Pig Keeping.—As a result of the intensive work which had been carried on in connection with pigstyes during the previous two years, most of the premises in the city had been brought into a satisfactory condition by the end of 1932. It was found, however, that in order to maintain the improvement, strict supervision had

to be carried out. Hence, during the year action had frequently to be taken to secure compliance with the byelaws, and in three cases resort had to be made to court proceedings. In two of these cases the desired object was achieved, but the third case was adjourned *sine die* on the ground that the existence of nuisance had not been proved.

At the end of the year 1932 the total number of persons (excluding farmers) who kept pigs was 306.

Factory and Workshop Act, 1901.—A complete summary of the work done during the year under the above Act appears on pages 222 and 223.

Close co-operation continued to be maintained between the Department and H.M. Factory Inspectorate.

OTHER VISITS PAID BY MALE WORKSHOPS INSPECTORS.

	Factories.	Workshops.	Workplaces.
Non-abatements	252	187	129
Drain Inspection	106	28	106
Drains tested	43	16	33
Disease enquiries	35	7	17
River pollution .. ..	..	..	..
Complaints	69	33	4
Measurement of workrooms ..	..	..	..
Other causes	147	142	67
TOTAL	652	413	356

Plans.—The system whereby those plans submitted to the Building Surveyor which deal with schemes involving sanitary works are reviewed by this Department before being finally approved by the Corporation, was continued during 1932. The total number of plans examined and commented upon was 181.

Work of Women Inspectors.—During the year the two women inspectors carried out their various duties, comprising visiting of outworkers, investigation of outbreaks of infectious diseases in factories, workshops and schools, the routine inspection of workshops and certain restaurants, and the investigation of complaints received from the factory inspectors or other sources relating to sanitary defects affecting the health of female workers.

The following is a summary of their year's work :—

Infectious Diseases.—The following visits were made :—

To schools (on account of 913 cases)	..	1,150
To absent pupils	.. .. .	126
To factories (80 cases)	.. .. .	80
To workshops (2 cases)	.. .. .	2
To workplaces, including restaurants (25 cases)		25
To absent employees	.. .. .	2
Special visits	.. .. .	20

Factories and Workshops.—Part of the work done by the women inspectors under this heading appears on pages 222 and 223.

In addition to that appearing in the table the following visits were paid :—

Outworkers' homes	.. .. .	484
Outworkers, employers' premises	.. .. .	145
Factories	.. .. .	40
Workshops (routine and complaint)	.. .. .	576
Workplaces and restaurants do.	.. .. .	1,191
Special visits	.. .. .	41

2,477

Inspections of public sanitary conveniences

for women 486

Nuisances found 112, abated 106

FACTORIES AND WORKSHOPS.

1.—INSPECTION.

Premises.	Number of		
	Inspections.	Written Notices.	Prosecutions
Factories (Including Factory Laundries.) ..	537	172	..
Workshops (Including Workshop Laundries.) ..	2,436	88	..
Workplaces	1,352	84	..
Total	4,325†	344	..

2.—DEFECTS FOUND.

Particulars.	Number of Defects.			Number of Prosecutions.
	Found.	Remedied.	Referred to H.M. Inspector.	
<i>Nuisances under the Public Health Acts :—*</i>				
Want of cleanliness	147	145	..	..
Want of ventilation	6	6	..	..
Overcrowding .. ..	..	..	..	..
Want of drainage of floors ..	1	1	..	..
Other nuisances	594	585	..	..
Sanitary accom- modation.	{ insufficient ..	31	26	..
	{ unsuitable or			
	{ defective ..	155	142	..
Sec. 22 in force.	{ not separate for			
	{ sexes ..	25	22	..
<i>Offences under the Factory and Work- shop Act :—</i>				
Illegal occupation of underground bakehouse (S. 101) .. ..	..	..	..	..
Breach of special sanitary require- ments for bakehouses (SS. 97 to 100)	41	41	..	..
Other offences .. ..	..	..	..	..
Total	1,000	968	..	..

* Including those specified in Sections 2, 3, 7, and 8 of the Factory Act as remediable under the Public Health Acts.

† Exclusive of 4,003 visits to 640 bakehouses by ward inspectors, see page 211.

3. 4. 5.—OTHER MATTERS.

	Number of		
	Lists.	Outworkers.	
Homework :—		C.	W.
<i>List of Outworkers (S. 107) :—</i>			
Lists received twice in the year	316	548	444
„ once in the year	18	17	28
Addresses of) received from other Authorities ..		116	
outworkers) forwarded to other Authorities ..		1	
Notices to occupiers as to keeping or sending lists ..		417	
Prosecutions.. .. .		..
Inspection of Homeworkers' premises		591	
<i>Homework in unwholesome premises :—</i>			
Instances		22	
Notices		22	
Prosecutions.. .. .		..
<i>Homework in infected premises :—</i>			
Instances		6†	
Orders made (S. 110)		6	
Prosecutions (SS. 109, 110) .. .. .		..
[Infectious cases removed, disinfection carried out under ordinary powers.]			
Workshops on the Register (S. 131) at the end of year :—			
Ordinary (131 trades)		985	
Domestic (6 trades)		33	
Bakehouses on register as workshops		282	
Do. domestic		358	
Total number of workshops on Register		1,658	
Matters notified to H.M. Inspectors of Factories :—			
Failure to affix Abstract of the Factory and Workshop Act (S. 133)		20	
Action taken in matters referred by H.M. Inspectors as remediable under the Public Health Acts, but not under the Factory Act (S. 5) {	Notified by H.M. Inspector ..	96	
	Reports (of action taken) sent to H.M. Inspectors..	164	
Other .. .. .		..
Underground Bakehouses (S. 101) :—			
Certificates granted during the year .. .. .		..
In use at the end of 1932		25	

† 1 Diphtheria, 5 Scarlet Fever.

The above table is that required by the Home Office and represents work done by the male workshops inspectors and by the women inspectors.

BAKEHOUSES.

WARD.	OVERGROUND.			UNDERGROUND.			Total visits to all.
	Em- ployees beyond family.	Work- shop bake- houses.	Domestic bake- houses.	Em- ployees beyond family.	Work- shop bake- houses.	Domestic bake- houses.	
Mill Hill and South	56	in 16	20	1	in 1	..	179
Westfield ..	27	.. 15	29	..	..	..	227
Blenheim ..	46	.. 15	9	6	in 3	..	172
Central ..	146	.. 24	6	5	.. 2	..	71
Woodhouse..	24	.. 12	21	1	.. 1	2	142
North ..	21	.. 12	2	2	.. 1	1	75
Far Headingley ..	6	.. 6	11	..	..	..	140
Hyde Park..	64	.. 12	6	6	in 3	2	285
Kirkstall ..	11	.. 5	13	1	.. 1	1	296
Burmantofts ..	27	.. 12	16	2	.. 1	..	39
Harehills ..	23	.. 14	19	..	..	..	250
Potternewton ..	30	.. 11	4	1	in 1	1	27
Roundhay ..	13	.. 5	4	..	..	..	70
Cross Gates and Templenewsam ..	25	.. 14	4	..	..	..	270
Richmond Hill ..	12	.. 6	31	..	..	..	213
Osmondthorpe ..	11	.. 7	8	..	..	..	164
East Hunslet ..	10	.. 5	26	..	..	..	153
Hunslet Carr and Middleton ..	3	.. 2	4	6	in 2	..	116
West Hunslet ..	20	.. 11	16	4	.. 2	..	191
Beeston ..	20	.. 10	7	..	..	..	75
Holbeck (South) ..	48	.. 4	7	..	..	..	72
Holbeck (North) ..	84	.. 7	33	..	..	..	166
Armley and New Wortley ..	9	.. 7	10	..	..	..	181
Upper Armley ..	17	.. 10	19	..	..	..	231
Bramley ..	26	.. 16	13	..	..	..	172
Farnley & Wortley	19	.. 6	13	..	..	..	26
Totals ..	798	in 264	351	35	in 18	7	4,003

These visits made by Ward Inspectors only. This work is included in the figures in the table on page 211.

Rag Flock Acts, 1911 and 1928.—During the year 30 visits were made to premises occupied by persons manufacturing or using rag flock. Six samples were taken and submitted to the City Analyst for analysis and all were found to comply with the legal standard. The average amount of chlorine found to be present was 15 parts per 100,000 which compares very favourably with the legal standard of not more than 30. Two of the six samples were found to contain only eight parts.

Mortuary Accommodation.—During the year alterations were carried out at Marsh Lane Mortuary and the accommodation there enlarged and improved. Previously it possessed only three slabs, now the number is seven. In addition, the lay-out of the mortuary has been improved and by the introduction of suitable screens relatives can now view a body without being aware of the existence of other bodies. For both sentimental and other reasons this is a very great advantage. In consequence of the enlargement of Marsh Lane Mortuary it was found possible to close the small mortuary in Old Mill Lane, Hunslet.

The number of bodies dealt with at the Marsh Lane Mortuary since the completion of the alterations (August 25th, 1932) to June 2nd, 1933 was 202, comprising 188 admitted from private houses, workshops, etc., nine admitted as a result of street accidents, and five unclaimed bodies.

SMOKE ABATEMENT

The table on page 229 shows the work of the smoke inspectors during the year. The average duration of black smoke per observation decreased from 34 seconds in 1931 to 29 seconds in 1932 and the number of chimneys found offending against the byelaw decreased from 62 to 57. The ratio of offending chimneys to observations in 1932 was 1 to 124 which works out to a percentage of 0.8 as compared with 1 to 103 and 1.0 per cent. for the previous year and 1 to 70 and 1.4 per cent. for the previous five years. There were no prosecutions to record though warning letters were sent to all offenders.

The allowance of black smoke permitted by the byelaw in Leeds is three minutes in the aggregate in 30 minutes. This allowance is obviously too generous as may be gathered from the fact that the average duration of black smoke in 7,066 observations taken in 1932 was less than 30 seconds. That clearly proves that it is not only possible to keep within the legal limit but to go further and reduce black smoke to almost a negligible quantity. In view of this low record, I would suggest that the time has arrived when the byelaw might be revised and the limit of black smoke reduced from three minutes to two minutes in the aggregate in 30 minutes. Many of the surrounding Local Authorities have had the same experience as we have had in Leeds and are equally convinced that a tightening up of the byelaw is called for and would be glad to participate in any movement to this end. On the other hand, there is a number of Authorities who, while not opposed to a revision of the byelaw, think the time for such a revision inopportune. For the present we must hold our hand, but I hope that at no distant date unanimity will be obtained throughout the area of the West Riding when we shall be able to make concerted representation to the Minister of Health for a new byelaw.

There is one other point I should like to mention, it is with regard to the employment of certificated stokers. Now that the scheme of the West Riding of Yorkshire Regional Smoke Abatement Committee for the teaching and examination of stokers has become established throughout the area, it would be a graceful gesture on the part of employers, in which I include the various departments of the Leeds Corporation, if they would, when appointing stokers and boiler attendants, give preference to men who hold the Regional Committee's certificate. By so doing, they would not only encourage the men who have been enterprising enough to obtain the certificate, but also make a valuable contribution to the cause of smoke abatement.

Is there anything that the average citizen can do to get rid of the city's smoke pall? Most certainly there is. By giving up the burning of raw coal for heating and cooking purposes and substituting gas, electricity or smokeless fuel, he can do a great deal, not only to cleanse the atmosphere but also to beautify the city and enhance the health of the citizens.

West Riding of Yorkshire Regional Smoke Abatement Committee.—The Executive Committee held eight meetings during the year and the average attendance was 17. During the year the attention of the Committee was occupied by many subjects in connection with smoke abatement, amongst which the most important were :—

- (1) A survey of the present position with regard to the working of the Public Health (Smoke Abatement) Act, 1926, in this area.
- (2) The revision of the syllabus and regulations in connection with the training of stokers and boiler attendants and the holding of examinations for the certificate of the Regional Committee.

The Committee continued to receive the meteorological data respecting the state of the atmosphere from those constituent authorities which possess the necessary appliances. These were tabulated and laid on the table at the meetings of the Executive Committee.

The Examination Board met on eight occasions during the year to discuss matters in connection with the training of stokers and boiler attendants and the holding of examinations for the certificate of the Regional Committee. During the year courses were held at six colleges and the total number of students attending these courses was 130 averaging 23 per class. In the previous year courses were provided at 10 colleges, attended by 243 students with a class average of 24. Examinations were arranged for at five centres as compared with eight last year and 53 students entered of whom 45 or 85 per cent. were successful in obtaining the Committee's certificate. Last year out of 68 entrants, 53 or 78 per cent. were successful.

Further details will be found in the Annual Report of the Executive Committee, copies of which are to be had from the Secretary of the Committee at 12, Market Buildings, Leeds, 1.

Smoke Gauges.—The table on page 230 shows the monthly deposit of soot and ash in English tons per square mile for the years 1931 and 1932. Decreases were recorded at all the five stations. The station with the highest monthly average during 1932 was Park Square (28.7 tons) and that with the lowest Templenewsam (7.3 tons). Samples of dust were collected from buildings in various parts of the city and submitted to the City Analyst for analysis. The results of these analyses are set out in the City Analyst's report on page 197.

Sunlight and Daylight Gauges.—The table on page 231 shows the amount of daylight registered at Headingley and Park Square Stations for the years 1931 and 1932 and at York Road, Hunslet and Middleton Stations for the months of November and December 1931 and the year 1932. The gauges fixed at these stations consist of a solution of potassium iodide in dilute sulphuric acid. When exposed to light free iodine is liberated, the quantity of free iodine in solution being an index of the amount of daylight. An examination of the table will show that the figure for Headingley decreased from 6.44 in 1931 to 6.39 in 1932 and the figure for Park Square increased from 5.91 to 5.95. The station showing the highest average amount of daylight in 1932 was Middleton (7.11) and that with the lowest York Road (5.65).

The work of the smoke inspectors is given in detail in the subjoined table.

(1)						1932	1931
Furnaces inspected .. .. .	..	..	..	..	..	1,867	1,748
Observation of chimneys .. .. .	..	..	..	..	..	7,066	6,397
Number of minutes of black smoke during observations .. .. .	..	..	..	..	..	3,463	3,589
Average duration of black smoke per observation						0 mins. 29 secs.	0 mins. 34 secs.
Number of chimneys offending against the byelaw						57	62
Smoke prevention appliances adapted to furnaces						8	8
Furnaces altered or reconstructed .. ..	..	..	..	..	..	74	74
Firms who have adopted smokeless fuel ..	..	..	..	..	..	9	15
Chimneys newly erected .. .. .	..	..	..	..	..	5	11
Furnaces in connection with new chimneys ..	..	..	..	..	..	..	15
Numbers of firms adopting electricity .. ..	..	..	..	..	..	1	2
(Steam boilers discarded)							
Notices served on owners and occupiers ..	..	..	..	..	..	55	59
Prosecutions .. .. .	..	..	..	..	..	..	..

SMOKE OBSERVATIONS, 1922-1932.

(2)

Year.	Observations of Chimneys.	No. of Chimneys found offending against the byelaw.	Percentage.
1922	3,853	275	7.1
1923	6,007	202	3.3
1924	6,773	113	1.7
1925	4,373	92	2.1
1926	4,114	63	1.5
1927	4,185	58	1.4
1928	3,492	38	1.1
1929	3,384	77	2.3
1930	4,670	80	1.7
1931	6,397	62	1.0
1932	7,066	57	0.8

SOOT AND ASH GAUGES.
MONTHLY DEPOSIT IN ENGLISH TONS PER SQUARE MILE.
YEARS 1931 AND 1932.

Period.	STATIONS.									
	Headingley.		Park Square.		York Road.		Hunslet		Temple Newsam.	
	1931.	1932.	1931.	1932.	1931.	1932.	1931.	1932.	1931.	1932.
January ..	8.4	9.2	33.9	35.4	26.3	19.1	26.0	18.1	7.9	9.4
February ..	9.7	5.4	29.8	20.1	23.0	19.1	22.2	15.8	7.6	3.6
March ..	8.9	9.4	17.3	32.2	16.3	25.0	15.6	25.5	5.1	7.9
April ..	10.7	10.7	35.2	36.5	28.0	26.2	31.6	31.6	9.9	7.6
May ..	16.1	11.7	33.2	28.3	—*	26.5	23.5	19.4	9.2	8.4
June ..	13.5	7.1	31.9	21.4	27.0	20.2	24.0	23.2	11.2	4.6
July ..	9.2	12.2	28.0	30.1	25.0	29.1	33.4	36.2	10.2	11.0
August ..	10.2	5.9	23.2	21.7	21.9	21.9	18.1	18.9	8.9	6.9
September ..	10.2	8.4	30.1	26.0	20.9	19.9	18.1	26.0	9.4	9.2
October ..	6.9	9.2	29.1	37.2	29.6	24.5	18.3	18.4	7.4	7.9
November ..	14.8	7.9	37.5	28.3	26.0	17.9	19.6	14.8	11.5	5.6
December ..	7.9	8.7	32.1	27.5	22.9	15.3	18.1	7.7	11.0	5.4
Year ..	126.5	105.8	361.3	344.7	266.9 (11 months)	264.7	268.5	255.6	109.3	87.5
Monthly Average ..	10.5	8.8	30.1	28.7	24.3	22.1	22.4	21.3	9.1	7.3

* Gauge Tamped with.

TABLE SHOWING AMOUNT OF DAYLIGHT FOR THE YEARS 1931 AND 1932.

(Value expressed as Milligrams of Iodine liberated by the action of daylight on a mixture of dilute Sulphuric Acid and Potassium Iodide Solution).

Period.	STATIONS.									
	Headingley.		Park Square.		York Road.		Hunslet.		Middleton.	
	1931.	1932.	1931.	1932.	1931.	1932.	1931.	1932.	1931.	1932.
January	..	3·36	2·54	2·68	..	2·67	..	3·04	..	4·29
February	..	4·22	3·74	4·37	..	4·00	..	3·93	..	5·59
March	7·63	7·50	5·56	..	5·08	..	5·47	..	6·80
April	7·64	7·37	8·22	..	7·18	..	7·46	..	9·62
May	8·84	7·35	7·68	..	7·85	..	7·87	..	8·45
June	8·94	8·64	9·76	..	9·60	..	9·45	..	10·24
July	9·29	9·09	8·53	..	8·23	..	7·93	..	9·03
August	..	8·13	7·96	7·89	..	7·73	..	7·75	..	8·86
September	..	6·72	6·28	6·52	..	5·54	..	6·32	..	8·01
October	..	6·11	5·24	4·58	..	4·71	..	4·68	..	5·90
November	..	3·25	3·12	2·98	3·17	2·86	3·11	3·27	4·69	4·44
December	..	3·17	2·13	2·62	2·26	2·42	2·36	2·68	3·87	4·09
Year (average)	..	6·44	5·91	5·95	2·72 (2 m'ths)	5·65	2·74 (2 m'ths)	5·82	4·28 (2 m'ths)	7·11

Housing.

HOUSING.

A Sub-Committee was appointed to enquire into, and report upon, the present position and future policy of Housing in the city. Later, this was dissolved, and the full Improvements Committee was appointed to take charge of the investigation.

On March 1st, I appeared before the Committee and presented a report on the subject of slum clearance. Other bodies, public and private, interested in the subject also gave evidence.

The Majority Report of this Committee was issued in November, with an intimation that minority reports were to be presented.

A minority report signed by three members of the Committee was issued in February of this year. This report is in print and available to anyone who desires to read it.

Number of Houses.—The total number of houses in the city on December 31st, 1932, was 132,113, made up approximately of 74,051 back-to-back houses, and 58,062 through houses.

Empty Houses.—At the same date there were 1,585 unoccupied houses in the city, chiefly of the large residential type.

New Houses.—The number of new houses completed during the year was 2,516 of which 194 were back-to-back, 282 cottage flats, 1,096 working-class houses, and the remaining 944 were of a larger type. The number of houses, including flats, built by the City Council since the war is, 9,544, and the number built by private enterprise 12,021, in all a total of 21,565 houses.

A word of explanation is called for with regard to the 194 back-to-back houses included in the above list, as it may be thought odd that this type of house, notwithstanding that the building of back-to-back houses was prohibited by the Housing Act of 1909 (re-enacted in the Housing Act, 1925), should continue to be built. The Section in which this prohibition appears, contains a proviso to the effect that where plans were approved by the Local Authority prior to the passing of the Act permission to erect may not be withheld. The back-to-back houses built during 1932 fall within this category.

Housing Shortage.—The number of applicants for Corporation houses standing in the registers on December 31st, 1932 was 4,706. It must be noted, however, that the registers have been closed since

August 1930. They were re-opened for parlour houses only in December 1930, and this list remains open. For the smaller type, at Middleton only, the list was re-opened in March 1932.

Overcrowding.—The number of notices served by the Department for overcrowding during the year was 221, of which 42 were abated. The notices served were in exceptionally bad cases, but because of the housing shortage could not be enforced. All genuine cases of overcrowding were entered in the schedules submitted by this Department regularly to the City Engineer so that they might have advantage of the preferential allotment agreed to by the Improvements Committee. As mentioned in a previous report, that allotment, including the allotment for tuberculosis, was increased in 1931 from 10 per cent. to 25 per cent. of the available houses.

In four areas inspected during the year for representation as unhealthy areas with a total of 617 houses, 221 or 35·8 per cent. were found to be overcrowded. Further enquiries made in similar areas in other parts of the city confirm these figures. It is obvious therefore that the "overcrowding" evil still exists and in certain districts is very marked. The moral and physical degradation which is a constant concomitant of overcrowding must be equally pronounced. The subject is further referred to on page 20.

Unfit Houses.—The number of houses inspected and found not to be in all respects reasonably fit for human habitation was 2,573, of which 1,974 were repaired in response to notices served by the Department. In addition 24,871 houses were found to be defective in some respect or other, and were repaired.

During the year 25 houses were represented as "unfit" under Sections 19, 20 and 21 of the Housing Act, 1930. Of these demolition orders were made in 14, closing orders in 3, while undertakings were accepted from the owners that they would not relet for human habitation in five. In the remaining three no action was taken.

Unhealthy Areas.—The position as regards these was at December 31st *statu quo*. A commencement was not made with the five years programme adopted in November 1931 until January 1933, when three areas, Cavalier Street, Meadow Lane and Woodhouse Street, comprising 430 houses and other buildings were formally represented. Details of these will appear in my next report.

The West Street Unhealthy Area, which was again represented in September 1931, because of circumstances explained in my last report, became the subject of another local enquiry which was held in Leeds by the Ministry of Health in October. The result of the enquiry had not come to hand on December 31st. Since then the Order has been confirmed by the Ministry of Health and the acquisition of the houses and clearance of the area are now in progress. After ten years during which the West Street Area has never failed to find a place in this report, it would seem that at last the end is in sight, and that before the time arrives for me to write another report the last house will have disappeared.

Verminous Houses.—As a result of the inspections made in the West Street Unhealthy Area, supplemented by inspections in other similar Areas, now represented or to be represented in different parts of the city, it is very evident that in re-housing the people to be displaced, some provision will have to be made for dealing with verminous houses.

As I have said elsewhere, I have been much struck by the cleanliness of many of the people living in the poorer and more congested districts of the city, but I have also been appalled by the number of houses which are vermin infested. Some are worse than others, but it would be true to say that upwards of eighty per cent.—for some areas the figure might be put higher—in the unhealthy areas are definitely infested.

The problem in view of the approaching campaign for the clearance of slums is therefore one of considerable magnitude and urgency. Our present methods of disinfestation are too uncertain and ineffective. We can deal with the clothing and bedding by the ordinary process of steaming, but articles of furniture and such like cannot be treated in this way. Fumigation by any of the known methods fails to exterminate the resistant and elusive bed bug whose habitat is usually in the most inaccessible places. One cannot contemplate with equanimity the transfer of bug-infested furniture to new houses, and measures will have to be devised effectively to prevent such an occurrence. What these measures will be I cannot at present say, but they will almost certainly entail the outlay of a considerable amount of money. Whatever the cost it will be fully justified, if, as a result of the action taken, the pest is overcome and the new houses secured against invasion.

TABLE SHEWING THE NUMBER OF HOUSES ERECTED IN LEEDS
DURING THE LAST THIRTY-ONE YEARS, ENDED 31st MARCH, 1933.

Year.				By Private Enterprise.	By Leeds City Council.	Total.
1903	..	..	..	2,572	..	2,572
1904	..	..	..	2,923	..	2,923
1905	..	..	..	2,442	..	2,442
1906	..	..	..	1,748	..	1,748
1907	..	..	..	1,135	..	1,135
1908	..	..	..	919	..	919
1909	..	..	..	836	..	836
1910	..	..	..	584	..	584
1911	..	..	..	505	..	505
1912	..	..	..	350	..	350
1913	..	..	..	220	..	220
1914	..	..	..	287	..	287
1915	..	..	..	228	..	228
1916	..	..	..	146	..	146
1917	..	..	..	51	..	51
1918	..	..	..	5	..	5
1919	..	..	..	4	..	4
1920	..	..	..	7	..	7
1921	..	..	..	104	92	196
1922	..	..	..	118	930	1,048
1923	..	..	..	108	1,810	1,918
1924	..	..	..	354	264	618
1925	..	..	..	593	358	951
1926	..	..	..	1,044	332	1,376
1927	..	..	..	1,522	856	2,378
1928	..	..	..	1,553	830	2,383
1929	..	..	..	1,254	618	1,872
1930	..	..	..	1,696	976	2,672
1931	..	..	..	913	738	1,651
1932	..	..	..	1,439	1,195	2,634
1933	..	..	..	1,758	689	2,447
Totals				27,418	9,688	37,106

TABLE SHEWING THE TOTAL AMOUNT OF HOUSING WORK DONE
BY THE LEEDS CITY COUNCIL TO 31ST MARCH, 1933.

ASSISTED SCHEMES. (1919 ACT).

NAME OF ESTATE.	Sewers laid. Length in yds.	Roads formed, pitched and ashed. Length in yds.	No. of Houses and Flats for which Contracts have been signed.	No. of Houses and Flats com- pleted	No. of Houses and Flats on which work has been com- menced including those in previous column.
Hawksworth Wood ..	4,436	5,109	402	402	402
Wyther House ..	3,857	4,048	492	492	492
Meanwood	4,394	5,931	800	800	800
Crossgates	4,510	6,063	488	488	488
Middleton	4,239	5,477	697	697	697
Ivy House	Existing	Existing	46	46	46
Section 12/3 Houses	do.	do.	398	398	398
Demonstration Houses, Meanwood	included	above.	6	6	6
Totals	21,436	26,628	3,329	3,329	3,329

OTHER THAN ASSISTED SCHEMES
(including 1923, 1924 and 1930 Acts).

Wyther House ..	1,058	1,595	184	184	184
Meanwood	3,387	3,761	584	584	584
Crossgates	included	in A.S.	176	176	176
Middleton	10,492	11,604	1,814	1,728	1,814
Hollin Park	2,647	2,396	345	345	345
York Road	7,904	9,805	1,700	1,634	1,634
Harehills	690	787	112	112	112
Hawksworth	639	541	206	206	206
Greenthorpe	1,161	1,290	216	216	216
Southfield	465	479	98	84	84
Dewsbury Road ..	1,567	1,536	336	334	336
Westfield	2,780	2,217	494	352	352
Potternewton	777	562	484	134	134
East End Park (pur- chased for re-housing)	Existing	Existing	192	192	192
Sandford House ..	2,772	..	36	36	36
Torre	1,591	1,482	362	42	134
Totals	37,930	38,055	7,339	6,359	6,539
Grand Totals ..	59,366	64,683	10,668	9,688	9,868

HOUSING ACT, 1930.

Table shewing the number of houses examined by the Medical Officer of Health as part of the general survey of the town during the year ending December 31st, 1932, and the numbers represented or otherwise dealt with, pursuant to the Housing Acts, with the corresponding figures for 1930 and 1931.

	1930.	1931.	1932.
Number of new houses erected during the year ..	1,792	2,239	2,516
(i) By the Local Authority	948	1,014	814
(ii) By other bodies and persons	844	1,225	1,702
1. <i>Inspection of dwelling-houses during the year.</i>			
(1) Total number of dwelling-houses inspected for housing defects under Public Health or Housing Acts and the number of inspections made	12,012	12,855	12,269
(2) Number of dwelling-houses (included under Sub-head (1) above) which were inspected and recorded under the Housing Consolidated Regulations, 1925, and the number of inspections made	1,474	1,381	409
(3) Number of dwelling-houses found to be in a state so dangerous or injurious to health as to be unfit for human habitation	689	223	642
(4) Number of dwelling-houses (exclusive of those referred to under the preceding sub-head) found not to be in all respects reasonably fit for human habitation	1,669	2,007	1,837
2. <i>Remedy of Defects during the year without Service of Formal Notices.</i>			
Number of defective dwelling-houses rendered fit in consequence of informal action taken by the Local Authority or their Officers	1,059	1,247	1,236
3. <i>Action under Statutory Powers during the year.</i>			
A.—Proceedings under Sections 17, 18 and 23 of the Housing Act, 1930.			
(1) Number of dwelling-houses in respect of which notices were served requiring repairs ..	462	702	736
(2) Number of dwelling-houses which were rendered fit after service of Formal Notices :—			
(a) By owners	486	664	735
(b) By Local Authority in default of owners ..	..	..	3
B.—Proceedings under the Public Health Acts.			
(1) Number of dwelling-houses in respect of which notices were served requiring defects to be remedied	28,010	27,430	24,477
(2) Number of dwelling-houses in which defects were remedied after service of formal notices :—			
(a) By owners	28,922	25,828	24,871
(b) By Local Authority in default of owners ..	..	..	..
C.—Proceedings under Sections 19, 20 and 21 of the Housing Act, 1930.			
(1) Number of dwelling-houses in respect of which Demolition or Closing Orders were made ..	..	1	17
(2) Number of dwelling-houses demolished in pursuance of Demolition Orders .. ..	..	1	..

**Health Education
and Propaganda.**

Staff Changes.

HEALTH EDUCATION AND PROPAGANDA.

BY

E. ASHWORTH UNDERWOOD, M.A., B.Sc., M.B., D.P.H.,
Chief Assistant Medical Officer of Health.

"More than any other single activity of government, a public health service can only be effective if it is received and practised by an enlightened people. They are partners here, and must take a sensible and intelligent share; for the matter is domestic and personal, an issue to be determined by man's will, or it is nothing."

—Sir GEORGE NEWMAN.

The above quotation indicates the modern view regarding the onus which is upon the people to maintain their bodies in a state of health. To do this effectively, simple teaching in the art of healthy living is essential. This education in matters of hygiene is no new thing. It was clearly foreshadowed by Sir Thomas More in his "Utopia," written four centuries ago.

A distinction must also be drawn between education in matters of hygiene on the one hand and in the treatment of illness on the other. In Leeds, health propaganda is always concerned with the former. The public are repeatedly warned that failure to seek medical advice during the early stages may seriously affect the ultimate issue of an illness.

Health Week.—Health Week was held from October 2nd to 8th, and proved to be one of the biggest and most successful which was ever held in the city. The programme was drawn up to appeal to all ages and sections of the community.

An important feature of the campaign was the active co-operation of other Corporation departments and of large organisations in the city and elsewhere. Due acknowledgment must be made of their help.

The main features of the week may be summarised as follows :—

1. During the week, 10 special film addresses were given in various cinemas to audiences of selected school children, and in addition numerous short films and lantern slides dealing with health subjects were exhibited in many of the cinemas.
2. The advertising scheme was greatly extended ; 1,052 posters were displayed at points of vantage throughout the city, and 94,696 leaflets and booklets were distributed at the various meetings and lectures.
3. The number of open competitions was increased.
4. During the week 41 lectures were given on health subjects at certain large factories, clubs, and religious and welfare associations in the city. The total attendances at these lectures was estimated at 11,802 persons, and the audiences showed much interest and enthusiasm, as was evidenced by the numerous questions which were asked.
5. Special health talks were given to the mothers attending the various babies' welcomes.
6. Through the kindness and courtesy of the Leeds and District Branch of the Cinematograph Exhibitors' Association of Great Britain and Ireland, 25 films and 94 lantern slides were exhibited in several cinemas.
7. A special effort was made to interest ministers of religion in the city, and a circular letter was drawn up, stating in detail the activities of Health Week, the reasons why it was held, and offering suggestions as to how ministers of religion could assist in achieving its objects.
8. A notable feature of the competitions was the introduction of a health slogan competition. Many excellent entries were received and the competition proved very popular.
9. The usual health poster competition, open to school children, provided some very interesting entries, and was an

unqualified success. In the various essay competitions some excellent entries were received.

10. Through the kindness of the City Librarian and the Libraries and Arts Committee, 50,000 bookmarks were distributed.
11. Special articles amounting in all to 280 column inches appeared in the newspapers circulating in the city. The assistance of the Press is invaluable in such a campaign.

Acknowledgment of their co-operation is gratefully made to the Education, Tramways, Libraries and Baths Departments of the Corporation, to the Leeds National Health Insurance Committee, to the Leeds and District Branch of the Cinematograph Exhibitors' Association, to the Press, Ministers of Religion and others who helped to make the week a success.

Parents' Conferences.—With the co-operation of the Education Department, eight conferences for parents were held in February, the subject dealt with being tuberculosis and its prevention. There was an average attendance at each meeting of 150, and the meetings were remarkable because of the interest which was shown by the audiences. During this week in February, 10 dinner-hour talks were also given in various factories in the city. The attendance naturally varies with the size of the factory, but the average attendance was high and in one factory approximated 1,000.

Wayside Pulpits.—The display of slogans, conveying messages to the people was continued on the 11 existing wayside pulpits, and proved a successful means of propaganda.

Leeds Committee for Social Hygiene and Health Publicity.—During the year, five meetings were held. The Committee continued to be responsible for the general supervision of health publicity in the city. In so doing it is rendering a valuable public service which merits recognition and the warmest thanks not only of the Council but of the citizens as a whole.

The total number of addresses given on health subjects during 1932, was 103. This figure includes three lectures given under the auspices of the Leeds National Health Insurance Committee, which throughout the year has identified itself with the publicity campaign of the Leeds Committee for Social Hygiene and Health Publicity.

STAFF CHANGES.

J. N. Hill, M.B., Ch.B., appointed Resident Medical Officer at Seacroft Hospital for a period of six months, April 1932, in place of G. F. Bramley, M.B., Ch.B.

J. F. Galpine, M.R.C.S., L.R.C.P., Assistant Resident Medical Officer at Seacroft Hospital appointment extended for six months, April 1932.

J. Cardis, M.D., appointed Public Vaccinator for No. 9 Vaccination District, April 1932, in place of D. McCann, L.R.C.P., L.R.C.S.

C. P. Kelly, M.B., Ch.B., B.A.O., appointed Public Vaccinator for No. 10 Vaccination District, April 1932, in place of J. W. Hopkins, M.R.C.S., L.S.A.

J. P. G. Daly, M.B., Ch.B., B.A.O., appointed Public Vaccinator for Nos. 21 and 22 Vaccination Districts, April 1932, in place of B. Wainman, M.R.C.S., L.R.C.P.

F. Danks, M.B., Ch.B., appointed Public Vaccinator for Holbeck Institution, May 1932, in place of I. Taylor, M.R.C.S., L.R.C.P., resigned April 1932.

M. Melvin, M.B., Ch.B., appointed Public Vaccinator for Rothwell Institution and Rothwell Children's Homes, May 1932, in place of J. Buck, M.D., D.P.H., resigned April 1932.

J. F. Galpine, M.R.C.S., L.R.C.P., appointed Assistant Resident Medical Officer at Killingbeck Sanatorium for 12 months, July 1932, in place of E. Ward, M.R.C.S., L.R.C.P., resigned.

R. B. Becker, M.B., Ch.B., D.P.H., and G. P. Holderness, M.B., Ch.B., appointed Assistant Resident Medical Officers at Seacroft Hospital for period of six months, September 1932, in places of J. F. Galpine, M.R.C.S., L.R.C.P., and J. N. Hill, M.B., Ch.B.

J. H. E. Moore, M.A., M.B., Ch.B., appointed Public Vaccinator for No. 18 Vaccination District, September 1932, in place of S. Moore, M.D., M.Ch., M.A.O., resigned July 1932.

Appendices.

APPENDIX 1.

MINISTRY OF HEALTH TABLES.

TABLE I.

VITAL STATISTICS OF WHOLE DISTRICT DURING 1932 AND PREVIOUS YEARS.

YEAR.	Population estimated to Middle of each Year.	BIRTHS.			TOTAL DEATHS REGISTERED IN THE DISTRICT.			TRANSFERABLE DEATHS.		NETT DEATHS BELONGING TO THE DISTRICT.			
		Un-corrected Number.	Nett.		Number.	Rate.	Of Non-residents registered in the District.	Of Residents registered in the District.	Under 1 Year of Age.		At all Ages.		
			Number.	Rate.					Number.	Rate per 1,000 Net Births.	Number.	Rate.	
1	2	3	4	5	6	7	8	9	10	11	12	13	
1922	466,700	9,500	9,253	19.8	6,589	14.1	425	315	935	101	6,479	13.9	
1923	469,900	8,991	8,684	18.5	6,128	13.0	451	309	773	89	5,986	12.7	
1924	471,600	8,862	8,558	18.1	6,824	14.5	435	358	921	108	6,747	14.3	
1925	472,900	8,518	8,180	17.3	6,286	13.3	570	321	748	91	6,037	12.8	
1926	473,400	8,437	8,065	17.0	6,285	13.3	531	308	748	93	6,062	12.8	
1927	477,600	8,075	7,790	16.3	6,438	13.5	578	338	629	81	6,198	13.0	
1928	474,800*	7,978	7,665	16.1	6,419	13.5	545	259	606	79	6,133	12.9	
1929	478,500	7,725	7,426	15.5	8,289	17.3	657	266	722	97	7,898	16.5	
1930	478,500	7,905	7,568	15.8	6,235	13.0	544	239	512	68	5,930	12.4	
1931	486,400	7,557	7,219	14.8	6,810	14.0	553	249	552	76	6,506	13.4	
1932	484,900	7,368	7,004	14.4	6,771	14.0	550	248	617	88	6,469	13.3	

Area of District in } 38,105
acres (land and
inland water)

Total population at all ages at the 1931 Census 482,809

* Population adjusted to allow for change in boundary during the year. The mid-year population after the change is 476,500.

APPENDIX 2.

TABLE II. CASES OF INFECTIOUS DISEASES NOTIFIED DURING THE CALENDAR YEAR 1932

NOTIFIABLE DISEASE.	NUMBER OF CASES NOTIFIED.							Total Cases removed to Hospital.
	At all Ages.	At Ages—Years.						
		Under 1.	1 and under 5 years.	5 and under 15 years.	15 and under 25 years.	25 and under 45 years.	45 and under 65 years.		65 and upwards.
Small-pox .. .. .	..	..	..	..	..	..	..	..
Cholera (C.) Plague (P.) .. .. .	..	..	..	..	..	..	..	..
Diphtheria (including Membranous Croup)	889	9	217	513	101	47	2	..
Erysipelas	289	9	9	9	13	83	116	50
Scarlet Fever.. .. .	931	6	253	517	106	44	4	1
Measles	3,540	222	2,025	1,264	20	5	4	..
German Measles	86	7	21	53	5	..	..	..
Typhus Fever .. .. .	..	..	..	..	..	..	..	..
Enteric Fever	9	..	..	1	3	2	1	2
Relapsing Fever (R.) Continued Fever (C.)	..	..	..	..	..	..	..	..
Puerperal Fever	28	..	..	..	7	21	..	..
Puerperal Pyrexia	43	..	..	..	16	27	..	..
Cerebro-Spinal Meningitis	21	5	5	2	6	3	..	..
Polio-myelitis	6	..	2	2	2	..	..	..
Ophthalmia Neonatorum	46	46	..	..	..	..	..	..
Encephalitis Lethargica	3	..	..	1	2	..	..	..
Malaria .. .. .	..	..	..	..	..	..	..	..
Dysentery .. .. .	..	..	..	..	..	..	..	..
Other Diseases	279	17	67	93	52	38	12	279
Pulmonary Tuberculosis	574	..	7	67	166	205	114	15
Other forms of Tuberculosis	162	5	28	58	36	24	8	3
Pneumonia (Acute Primary)	748	46	171	149	75	132	123	52
„ (Acute Influenzal)	109	6	19	12	15	26	23	8
TOTALS	7,763	378	2,824	2,741	625	657	407	131
								2,681

Isolation Hospital or Hospitals, Sanatoria, &c. :—City Fever Hospital, Seacroft and Killingbeck.

In addition to the 370 Pulmonary Tuberculosis and 15 Tuberculosis (Other Forms), removed, 41 Pulmonary Tuberculosis and 11 Tuberculosis (Other Forms), were admitted to "The Hollies," Westwood Lane, and 97 Pulmonary Tuberculosis and 1 Tuberculosis (Other Forms), were admitted to Gateforth Sanatorium which is outside the City. They are included in the 574 and 162 notified.

TABLE II. (continued).

TOTAL CASES NOTIFIED IN EACH LOCALITY, (e.g., Parish or Ward) of the District.																												
NOTIFIABLE DISEASE.	Mill Hill and South.	Westfield.	Blenheim.	Central.	Woodhouse.	North.	Far Headingley.	Hyde Park.	Kirkstall.	Burmantofts.	Harehills.	Potternewton.	Roundhay.	Cross Gates and Templenewsum.	Richmond Hill.	Osmondthorpe.	East Hunslet.	Hunslet Carr and Middleton.	West Hunslet.	Beeston.	Holbeck (South).	Holbeck (North).	Armley and New Wortley.	Upper Armley.	Bramley.	Farnley and Wortley.	CITY.	
Small-pox ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Cholera (C) Plague (P)	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Diphtheria (including Membraneous Croup)	105	26	24	39	27	24	40	15	20	69	32	21	30	34	50	51	52	36	35	35	13	15	47	31	14	23	16	889
Erysipelas ..	25	13	15	10	11	11	8	6	12	10	10	10	5	10	11	12	12	10	7	10	10	20	14	11	4	10	289	
Scarlet Fever..	55	26	32	27	38	15	20	19	34	58	34	20	16	52	59	75	27	62	30	15	29	20	25	50	51	42	931	
Measles ..	101	99	160	422	305	120	317	81	67	447	153	87	49	65	352	225	38	35	76	83	59	54	80	24	12	29	3,540	
German Measles	6	3	5	1	5	4	9	4	3	..	5	12	6	3	1	1	6	3	1	2	1	1	1	1	..	3	86	
Typhus Fever	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Enteric Fever	1	..	..	3	3	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	9
Relapsing fever (R) Continued fever (C)	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Puerperal Fever	1	2	7	1	2	2	..	1	1	1	1	2	2	2	1	1	1	1	..	28
Puerperal Pyrexia ..	1	3	1	3	..	1	1	..	1	10	..	1	1	..	2	4	1	2	1	1	1	1	1	1	1	5	1	43
Cerebro-Spinal Meningitis	2	1	1	3	2	2	1	1	1	1	1	21
Polio-myelitis	1	1	..	1	..	1	2	2	1	1	6
Ophthalmia Neonatorum	2	4	6	5	1	4	..	2	3	2	4	3	2	..	1	1	3	1	1	1	1	46
Encephalitis Lethargica	1	1	1	3
Malaria
Dysentery
Other Diseases	31	20	20	15	10	7	6	2	7	13	8	8	4	14	15	7	13	16	11	4	4	20	7	8	4	5	279	
Pulmonary Tuberculosis	34	31	35	24	22	7	22	9	16	37	13	15	11	7	73	31	22	21	19	15	16	29	31	12	12	10	574	
Other Forms of Tuberculosis	8	12	6	7	2	5	..	1	9	10	4	3	7	12	17	4	8	8	2	..	8	8	7	5	4	5	162	
Pneumonia (Acute primary)	52	34	30	27	27	11	3	11	33	36	15	12	10	23	64	30	50	47	21	23	22	52	25	15	36	34	748	
Do. (Acute Influenzal)	5	5	1	2	7	1	1	6	6	9	2	8	6	5	8	5	5	5	1	2	3	2	8	1	2	3	5	109
TOTALS	433	278	344	586	460	207	428	154	209	702	277	204	146	234	658	449	241	250	208	169	182	257	225	144	157	161	7,763	

APPENDIX 3.

CAUSES OF, AND AGES AT DEATH DURING THE CALENDAR YEAR 1932

REGISTRAR GENERAL'S FIGURES.

CAUSES OF DEATH.	Sex.	All Ages.	0-	1-	2-	5-	15-	25-	35-	45-	55-	65-	75-
All Causes	M.	3,381	361	48	78	84	121	129	210	396	660	757	537
	F.	3,091	256	61	66	71	126	145	176	302	434	706	748
1. Typhoid and Para-typhoid Fevers	M.	25	9	11	5	..	..	..	..	..	..	..	..
	F.	26	7	9	8	2	..	..	..	..	..	..	..
2. Measles	M.	5	1	1	2	1	..	..	..	..	..	..	..
	F.	3	1	..	1	1	..	..	..	..	..	..	..
3. Scarlet Fever	M.	21	8	7	6	..	..	..	..	..	..	..	..
	F.	21	11	6	4	..	..	..	..	..	..	..	..
4. Whooping Cough	M.	20	..	..	5	14	1	..	..	..	..	..	..
	F.	28	2	1	10	12	2	1	..	..	..	..	..
5. Diphtheria	M.	61	3	..	2	1	2	6	8	16	12	11	..
	F.	58	2	..	4	2	2	4	8	7	9	18	..
6. Influenza	M.	6	..	..	..	..	2	..	3	..	1	1	..
	F.	5	..	..	..	..	2	..	1	1	1	1	..
7. Encephalitis Lethargica	M.	9	3	2	..	2	1	..	..	..	1	..	..
	F.	10	4	2	1	..	3	..	..	..	..	..	..
8. Cerebro-spinal Fever	M.	240	..	..	1	2	33	37	42	66	45	14	..
	F.	144	..	..	..	..	49	45	25	13	7	4	1
9. Tuberculosis of respiratory system	M.	56	8	3	14	9	8	3	3	2	2	1	..
	F.	54	4	4	10	11	8	4	2	6	3	2	..
10. Other Tuberculous Diseases	M.	17	5	..	..	..	1	..	1	3	4	3	..
	F.	6	1	..	..	1	1	..	1	1	1	..	..
11. Syphilis	M.	31	..	..	..	..	3	8	10	8	2	..	..
	F.	16	..	..	..	..	1	3	4	6	1	1	..
12. General Paralysis of the insane—tabes dorsalis	M.	370	..	..	..	2	..	12	17	46	114	129	50
	F.	396	..	..	..	..	..	14	31	74	109	103	65
13. Cancer, malignant disease	M.	27	..	..	..	..	1	2	1	7	10	6	..
	F.	64	..	..	..	..	..	1	3	6	13	29	12
14. Diabetes	M.	191	..	..	..	1	..	1	2	14	55	76	42
	F.	205	..	..	..	..	..	..	2	14	43	77	69
15. Cerebral Hamorrhage, &c.	M.	603	..	..	6	7	10	19	69	145	195	152	..
	F.	677	..	..	1	4	10	14	34	72	115	213	214
16. Heart Disease	M.	19	..	..	..	..	..	1	2	3	6	4	3
	F.	4	..	..	..	..	..	..	1	..	2	1	..
17. Aneurysm	M.	265	..	..	..	..	..	..	6	41	114	104	..
	F.	246	..	..	..	..	..	..	1	3	27	71	144
18. Other circulatory diseases	M.	149	14	..	1	..	..	1	8	22	28	23	52
	F.	146	8	5	1	1	..	2	12	8	30	77	77
19. Bronchitis	M.	305	64	11	16	11	14	12	29	40	49	38	21
	F.	202	46	18	15	14	8	15	6	16	18	27	19
20. Pneumonia (all forms)	M.	32	2	1	2	..	..	1	2	7	5	9	3

APPENDIX 4.

INFANT MORTALITY. CALENDAR YEAR 1932. NETT DEATHS FROM STATED CAUSES
AT VARIOUS AGES UNDER 1 YEAR OF AGE.

CAUSES OF DEATH.	Under 1 day.	1-7 days.	1-2 weeks.	2-3 weeks.	3-4 weeks.	Total under 4 weeks.	4 weeks and under 3 months.	3 months and under 6 months.	6 months and under 9 months.	9 months and under 12 months.	Total Deaths under 1 year.
Small-pox .. ..	..	..	..	..	..	..	..	..	..	..	..
Chicken pox .. ..	..	..	..	..	..	..	..	..	..	..	..
Measles .. ..	..	..	..	..	..	..	..	3	9	5	17
Scarlet fever .. ..	..	..	..	..	..	..	..	..	1	1	2
Whooping Cough .. ..	..	..	..	..	..	..	6	6	1	5	18
Diphtheria .. ..	..	..	..	..	..	..	..	..	..	2	2
Influenza .. ..	..	..	..	1	1	2	..	1	1	1	5
Erysipelas .. ..	..	..	..	..	1	1	..	1	2	..	4
Tuberculous Meningitis .. ..	..	..	..	..	..	..	..	2	4	2	8
Abdominal Tuberculosis .. ..	..	..	..	..	..	..	..	..	..	1	1
Other Tuberculous Diseases .. ..	..	..	..	..	..	..	..	..	2	..	2
Meningitis (not Tuberculous) .. ..	..	..	..	..	..	..	1	3	2	..	6
Convulsions	1	9	2	1	..	13	1	..	4	1	19
Bronchitis .. ..	..	1	..	1	..	2	8	4	6	3	23
Pneumonia (all forms) .. ..	..	1	1	2	4	8	20	29	26	23	106
Other diseases of respiratory organs	1	..	..	..	..	1	..	1	2	..	4
Diarrhoea .. ..	..	2	1	2	3	8	27	34	12	13	94
Enteritis .. ..	..	..	..	..	..	..	..	..	..	..	..
Gastritis .. ..	..	1	1	..	..	2	2	1	1	..	6
Syphilis .. ..	..	..	..	..	1	1	5	1	..	..	7
Rickets .. ..	..	..	..	..	..	..	..	..	..	1	1
Suffocation, including overlying	6	..	..	2	..	8	2	..	..	..	10
Injury at birth	9	7	..	..	..	16	..	..	..	..	16
Atelectasis	15	5	1	..	..	21	..	..	..	..	21
Congenital Malformations	4	6	1	2	2	15	11	..	4	1	31
Premature birth	59	37	9	5	8	118	9	1	..	..	128
Atrophy, Debility and Marasmus	4	5	3	1	..	13	8	1	..	..	22
Other Causes	5	11	5	3	2	26	10	12	8	8	64
Totals	104	85	24	20	22	255	110	100	85	67	617